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The New York Academy of Medicine

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# The Journal

OF THE

## South Carolina Medical Association

VOL. XX.

GREENVILLE. S. C., JANUARY, 1924

NO. 1

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## The Baker Sanatorium

Colonial Lake

Charleston, S. C.

ARCHIBALD E. BAKER, M. D., F. A. C. S. Surgeon in Charge

ARCHIBALD E. BAKER, JR., M. D., Associate



*A New  
and thoroughly  
equipped  
hospital for the  
care of Surgical  
patients.*



MEAD'S

### WHAT'S IN A NAME

Whose name is signed to infant feeding instructions in your community—the manufacturer's or yours?  
You are the doctor.

Does the family physician instruct the mother of a baby to go to a drugstore and follow the druggist's advice as to the selection of a food for the infant's requirements? Hardly ever.

Generally the doctor writes his feeding formula just as he does any other prescription and changes it from time to time to suit the requirements of the individual infant. His name and reputation are at stake. The baby's nutrition must be considered and possibly its life may be saved by proper food.

#### FIRST THOUGHT

## BREAST MILK

#### SECOND THOUGHT

### Cow's Milk, Mead's Dextri-Maltose and Water

The physician who uses Mead's Dextri-Maltose when artificial feeding is necessary controls his case. There is no outside interference and his creative talent has full scope because Mead's Dextri-Maltose is supplied without directions on the packages and no advertising is done to the laity.

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Phamphlet describing methods for prolonging breast milk, and samples of Mead's Dextri-Maltose, will be sent to physicians on request.



MEAD JOHNSON & COMPANY,  
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# Physicians!

## Do You Favor Food Law Enforcement?

You appreciate the vital importance of pure and fresh drugs—drugs that are prepared and packed under certain government regulations.

How about foods? Aren't they just as important? Take baking powder, for instance—it is useful only when it produces its maximum of leavening strength in the baking. Leavening efficiency means light, wholesome breadstuffs—bakings that are easily digested, which in turn aid towards perfect health. Lack of leavening strength means flat and soggy bakings which are surely indigestible.

The pure food laws of our country have standardized baking powder—they require that it contain 12% leavening gas at the time of sale to the consumer. Why is it that these laws have not been applied to baking powder when mixed with flour and sold in cotton sacks?

Thousands of barrels of self rising flour are annually sold in our southern states without regulation by pure food measures, with the exception of Texas.

Any grade of flour and any quality or strength of baking powder can be used in so-called self rising flour mixtures and sold to the unthinking public without official criticism or regulation.

Numerous baking and laboratory experiments have been conducted by state chemists and other investigators. They found a surprising amount of this mixed flour to be so deteriorated as to be productive only of heavy, soggy bakings.

Do you want your patients to eat foods made from self rising flours that do not contain the necessary leavening strength—foods that are hard to digest and a detriment to health? Do you want the law to protect the consumer in this instance as it protects the user of drugs? It is for you and others interested in public health to decide.

Remember Calumet Baking Powder meets every requirement of the law—that it retains its great leavening strength to the last spoonful. Packed in tin—keeps the strength in.



# Operative Surgery

Special course in general surgery, operative technique and gynecologic surgery given to physicians of both sexes. Enrollment limited to THREE.

First assistantship. No cadaver or dog-work

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Holds supreme place

Professor H. C. Sherman rates the oat at 2465 in his "Composite Valuation of Typical Foods."

This scoring is based on calories, protein, phosphorus, calcium and iron.

It is the highest rating given to any grain food quoted.

Quaker Oats are flaked from just the choicest grains. A bushel of fine oats yields but ten pounds of these extra-flavory flakes. It is that flavor which gives the oat dish its delights, and one should always get it.

## Quaker Oats

Just the cream of the oats

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These laboratories are equipped for making every test of clinical value in the diagnostic study of medical and surgical cases.

In addition to the diagnostic study of cases there are adequate facilities for the x-ray and radium treatment of conditions in which these forms of treatment are indicated

Fee lists and containers for pathological specimens and information in reference to x-ray and radium work furnished upon request.

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P. G. Hamlin, M. D., Associate.

# Westbrook Sanatorium

## RICHMOND, VIRGINIA

---

The sanatorium is a private institution of 135 beds, located in the Ginter Park suburb, midway between trolley lines, within ten minutes ride of the heart of the city, and on the Richmond-Washington National Automobile highway. Midway between the North and the distant South, the climate of this portion of Virginia is almost ideal. Nearby are many reminders of the civil war, and many places of historic interest are within easy walking distance.

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The plant consists of twelve separate buildings, most of which are new, located in the heart of a beautifully shaded fifty-acre lawn, in the midst of a hundred and twenty acre tract of land. Remoteness from any neighbors assures absolute quietness.

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The buildings are lighted by electricity, heated by hot water, and are well supplied with baths. The water supply for the entire institution is derived from an artesian well on the grounds, of approved therapeutic value.

---

The scope of the work of the sanatorium is limited to the diagnosis and the treatment of nervous and mental disorders, alcoholic and drug habituation. Every helpful facility is provided for these purposes, and the institution is well equipped to care for such patients. It affords an ideal place for rest and upbuilding under medical supervision. Four physicians reside at the sanatorium and devote their entire attention to the patients. A chartered training school for nurses is an important part of the institution in providing especially equipped nurses—both men and women—for the care of the patients.

---

Systematized out-of-door employment constitutes an important feature of the treatment. Wonderful work in the arts and crafts is carried on under a trained teacher. There are bowling, tennis, croquet, billiards and pool.

---

The sanatorium maintains its own truck farm, dairy, and poultry yard.

Illustrated Booklet on Request.

# YOUR ADVERTISERS DESERVE YOUR PATRONAGE

This Journal makes every effort to exclude unworthy advertisements in order to protect its readers. The Journal could be filled with advertisements of the Nostrum class and it would prosper financially; but, since it is published primarily for the benefit of its readers and not for profit, all advertisements, known to be dishonest, or even questionable, are excluded.

Since this policy of discrimination protects you, it should be a privilege to patronize the advertisers in your own Journal. Don't experiment! Buy trustworthy goods from reliable houses.

You may depend on the advertisements printed in this Journal.

## "Formulas for Infant Feeding" New Edition

A thoroughly revised edition of our book, bound in leather, is now ready, and a copy will be mailed to physicians upon request.

To give some idea of the magnitude of this new work and how well it keeps step with the progress

**Whole Milk Formulas**

**For Infants about Three Months Old**

(Average weight 12½ pounds)

<i>Mellin's Food</i>	6 level tablespoons
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<i>Water</i>	16 fluidounces

(This amount is sufficient for 24 hours.)

Give the baby 4½ ounces every 3 hours; 7 feedings in the 24 hours. Increase the quantity of milk one ounce every sixth day until the amount of milk is 21 ounces, and decrease the quantity of water one ounce every fifteenth day until the amount of water is 14 ounces; then prepare the modification according to the formula for an infant four months old.

Details relative to the nutritive value of the above modification will be found on the opposite page.

12

**Analysis of the Foregoing Mixture**

Fat.....	1.70	1.81
Proteins.....	2.12	2.12
Carbohydrates.....	5.54	5.54
Salts.....	.52	.52
Water.....	90.01	90.01
	100.00	

**Weight in Grams of Food Elements in the Foregoing Mixture**

Fat.....	18.10 Grams
Proteins.....	21.28 "
Carbohydrates.....	55.39 "
Salts.....	5.17 "

A total of 99.94 grams of well-balanced nourishment.

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Fat.....	168 Calories
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Carbohydrates.....	227 "

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 Calories per fluidounce = 15.1  
 Energy-quotient, or Calories per pound of body-weight = 39.3

The amount of protein in the foregoing mixture equals the protein in 1.63 ounces of whole milk to each pound of body-weight.

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in infant feeding, we display two pages of this 80-page book. It will be noted that the formula adjusted to age and weight, together with simple instructions for progressive changes, is given on the left-hand page, and on the right practically every detail relative to the balance of nutrition is stated. This plan is followed throughout the book, thus giving information of daily usefulness not accessible in any other work of this nature.

Special formulas calculated to meet conditions other than normal, with suggestions for their practical application, broaden the scope of the work, which in its entirety marks a distinct advance toward a better understanding of infants' nutrition.

**Mellin's Food Co.**  
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When research so conducted is productive of apparatus with which the roentgenologist may realize a higher grade of work, thereby increasing his efficiency, then the prices of Victor apparatus are moderate indeed. Consider the importance—to both you and your patient—of that vital ten or fifteen per cent higher efficiency, from the standpoint of diagnostic and therapeutic results.

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Thyroids, standardized for iodine content.

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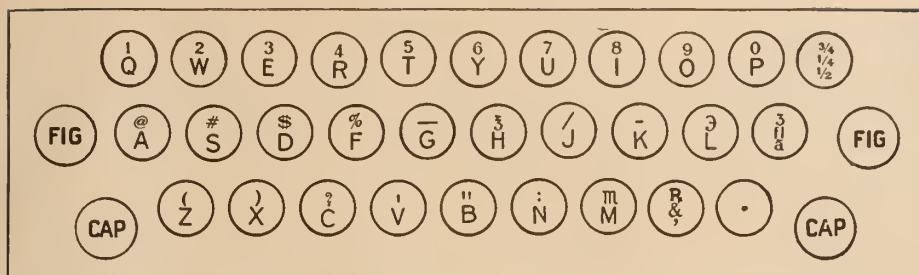
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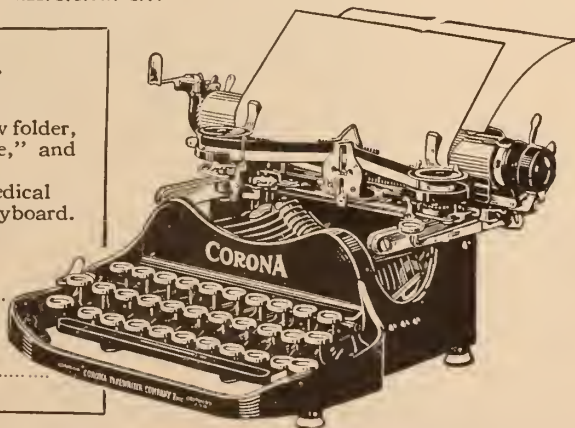
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FOR treatment of nervous and mild mental diseases. Located at beautiful Stone Mountain on boulevard 16 miles from Atlanta. Rooms with and without private baths, with steam heat, running water and electric lights. The equipment cuisine, location and rooms flooded with light and air. Experienced management and refined nurses give this institution the character of a real home for invalids and as such is ranks second to none. In short, this Sanitarium offers the highest type of professional services at rates patients can well afford. For information address Dr. J. Cheston King, Peachtree Building, Atlanta, or Dr. W. A. Gardner Stone Mountain, Ga., Medical Directors and Proprietors.

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Graduate School of Medicine, Tulane University of Louisiana

Included in list of Graduate Medical Schools approved by House of Delegates A. M. A.

Thirty-seventh Annual Session opens Sept. 24, 1923, and closes June 14, 1924

Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery, including laboratory, cadaveric work and the specialties.

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Tulane also offers highest class education leading to degrees in Medicine

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Physicians in good standing are cordially invited to visit the Battle Creek Sanitarium and Hospital at any time for observation and study, or for rest and treatment.

Special clinics for visiting physicians are conducted in connection with the Hospital, Dispensary and various laboratories.

"Physicians in good standing are always welcome as guests, and accommodations for those who desire to make a prolonged stay are furnished at a moderate rate. No charge is made to physicians for regular medical examination or treatment. Special rates for treatment and medical attention are also granted dependent members of the physician's family."

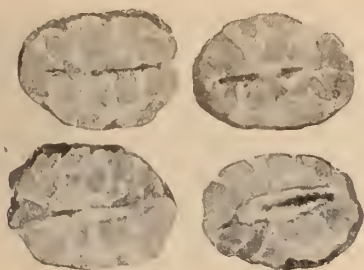
An illustrated booklet telling of the Origin, Purposes and Methods of the institution, a copy of the current "MEDICAL BULLETIN," and announcements of clinics, will be sent free upon request.

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Flakes much enlarged

## Rolled Wheat 25% Bran

Not ordinary wheat, but a special wheat—the most flavorful wheat that grows. And each flake hides 25% of bran.

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You will find it a dish to advise.

Package Free to physicians on request.

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Rolled Soft Wheat—25% Bran

The Quaker Oats Company, Chicago

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The Journal is held for  
thirty days and in order  
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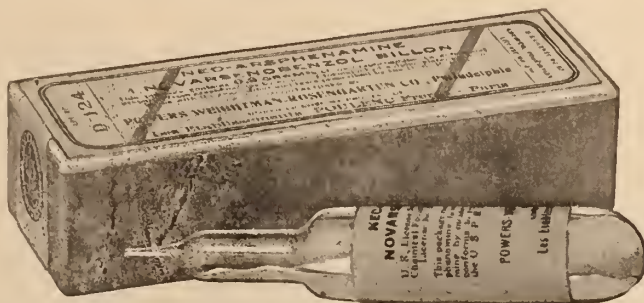
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ment and patients are required to take part in all of these under the supervision of the occupational director. Electrohydro and psychotherapy and massage are extensively used.

to rest cases. A trained dietitian superintends the preparation of all food. Training school for nurses.

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Quaker Puffed Wheat in a bowl of milk forms an ideal way to serve whole wheat and milk.

**Quaker Puffed Wheat**  
**Quaker Puffed Rice**



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Twenty percent of  
wisdom consists of  
being wise in time.

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**For Medical Protective Service**  
**Have a**  
**Medical Protective Contract**

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**The Medical Protective Co.**  
**of**  
**Fort Wayne, Indiana**

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## A Logical Vindication

It is significant to note that on the diet lists of the Lakeside Hospital, Cleveland, the Childrens' Hospital, Boston, the U. S. Government Hospital for Insane, Washington, D. C., and other representative hospitals and sanitariums throughout the country, there appears some form of hot bread.

Of course, this doesn't mean that hot biscuits are served patients whose diagnosis contra-indicate wheaten foods. Neither would you prescribe red meat or fresh fruit for every case. It pointedly indicates, however, that the hot biscuits or the hot muffin has won a place among rational clear-thinking dieticians as an admirable appetite excitant.

When you unreservedly strike hot biscuits from the diet of a patient, regardless of his ailment, aren't you depriving him of an appetizing food of no uncertain value? Carefully raised, properly baked hot biscuit made from good self-rising flour enjoy a universal popularity. Your patient has learned to appreciate their tastefulness when he is well. To substitute less appetizing bread when he becomes your patient should be justified only when hot biscuits are contra-indicated.

This is No. 6 of a series of advertisements to the medical profession regarding self-rising flour published by the Soft Wheat Millers' Association. Others will follow.



# YOUR ADVERTISERS DESERVE YOUR PATRONAGE

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Details relative to the nutritive value of the above modification will be found on the opposite page.

### Analysis of the Foregoing Mixture

Fat	..... milk	1.70	1.81
Proteins	..... { cereal	.42	2.12
	..... { lactose	2.29	
Carbohydrates	..... { maltose	2.40	5.54
	..... { dextrins	.85	
Salts	.....		.52
Water	.....		90.01
			100.00

### Weight in Grams of Food Elements in the Foregoing Mixture

Fat	.....	18.10	Grams
Proteins	.....	21.28	"
Carbohydrates	.....	55.39	"
Salts	.....	5.17	"

A total of 99.94 grams of well-balanced nourishment.

### Calories Contributed by Food Elements in the Foregoing Mixture

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Just the cream of the oats

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The large number of detached buildings makes easy the satisfactory and congenial grouping of patients. Separate buildings are provided for men and for women. Rooms may be had single or en suite, with or without private bath. A few cottages are designed for individual patients.

The buildings are lighted by electricity, heated by hot water, and are well supplied with baths. The water supply for the entire institution is derived from an artesian well on the grounds, of approved therapeutic value.

The scope of the work of the sanatorium is limited to the diagnosis and the treatment of nervous and mental disorders, alcoholic and drug habituation. Every helpful facility is provided for these purposes, and the institution is well equipped to care for such patients. It affords an ideal place for rest and upbuilding under medical supervision. Four physicians reside at the sanatorium and devote their entire attention to the patients. A chartered training school for nurses is an important part of the institution in providing especially equipped nurses—both men and women—for the care of the patients.

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# Soggy Biscuits and Indigestion

From time immemorial, leavening gas has been the "touch" which made the paste of flour and water a digestible food—the staff of life. A flat and soggy loaf or biscuit is an unleavened food. So it is that leavening agents such as yeast or baking powder are employed.

To insure to the American housewife complete leavening of her biscuits, cakes, muffins, etc., which is so important to perfect digestion, the pure food authorities found it wise to require a certain standard of leavening strength in baking powder.

To maintain this guaranty of digestibility—to insure minimum deterioration of leavening strength, baking powder must be packed in tin. This prevents absorption of atmospheric moisture. Dampness produces premature reaction between acid and soda—results in loss of leavening gas.

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But what about self rising flour? It comes to the southern housewife from remote northern mills packed in bags. What happens to this combination of baking powder material and flour?

Chemical analysis shows that much of it has lost its leavening strength before it reaches the consumer.

Breadstuffs made with such self rising flours cannot raise properly—they come to the table heavy, flat and soggy. You physicians are the best judges of the digestibility.

Why don't the pure food officials demand that self-rising flours contain 0.5% leavening gas, the equivalent to the 12% required of baking powder?

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No other manufacturer has so large an investment in research as the Victor X-Ray Corporation. A considerable portion of its earnings is reverted annually to be applied in physical and engineering investigation, to the end that the art of roentgenology may be advanced

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This large investment in research is a guarantee for the future. It is contributory in a large degree to the unquestioned supremacy of the American roentgenologist. It is a guarantee of the Victor X-Ray Corporation's permanency—a guarantee that X-ray users may confidently look to it for technical advances which will aid them in making the X-rays even more valuable than they now are.

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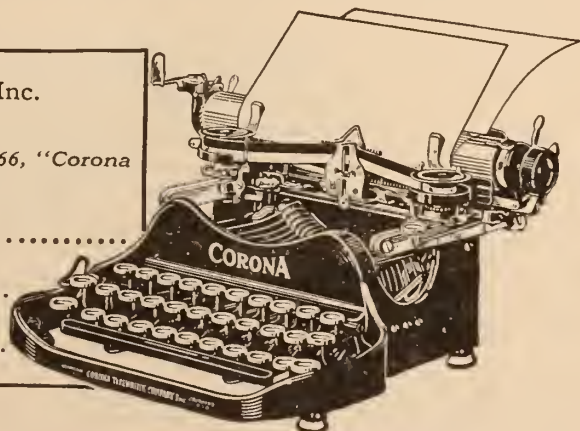
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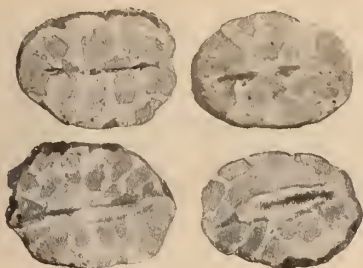
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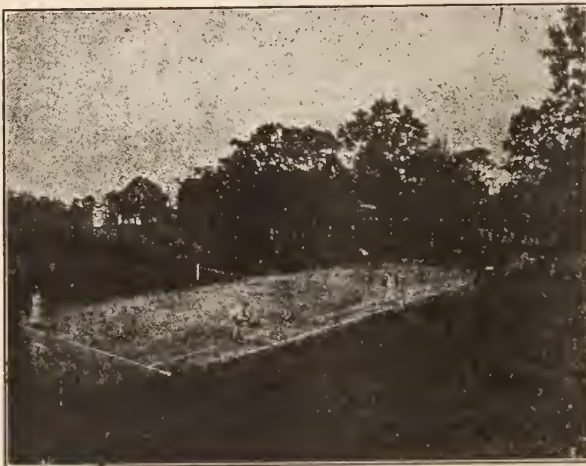
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# A Logical Vindication

It is significant to note that on the diet lists of the Lakeside Hospital, Cleveland, the Childrens' Hospital, Boston, the U. S. Government Hospital for Insane, Washington, D. C., and other representative hospitals and sanitariums throughout the country, there appears some form of hot bread.

Of course, this doesn't mean that hot biscuits are served patients whose diagnosis contra-indicate wheaten foods. Neither would you prescribe red meat or fresh fruit for every case. It pointedly indicates, however, that the hot biscuits or the hot muffin has won a place among rational clear-thinking dieticians as an admirable appetite excitant.

When you unreservedly strike hot biscuits from the diet of a patient, regardless of his ailment, aren't you depriving him of an appetizing food of no uncertain value? Carefully raised, properly baked hot biscuit made from good self-rising flour enjoy a universal popularity. Your patient has learned to appreciate their tastefulness when he is well. To substitute less appetizing bread when he becomes your patient should be justified only when hot biscuits are contra-indicated.

This is No. 6 of a series of advertisements to the medical profession regarding self-rising flour published by the Soft Wheat Millers' Association. Others will follow.

# The Journal

## OF THE

# South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

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EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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## EDITORIAL

### MILITARY COMMITTEE APPOINTED

The letter published below is self explanatory, and we would like to see the members of the South Carolina Medical Association respond promptly to the opportunity for enlistment in the Medical Reserve Corps. The following Committee has been appointed and stands ready for prompt service:

Dr. Curran B. Earle, Greenville, S. C., Chairman; Dr. E. A. Hines, Seneca, S. C., Secretary; Dr. W. H. Powe, Greenville, S. C.; Dr. Baylus F. Sloan, Walhalla, S. C.; Dr. Robert S. Cathcart, Charleston, S. C.; Dr. Harry H. Wyman, Jr., Aiken, S. C.; Dr. George Bennett, Columbia, S. C.; Dr.

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The Secretary,

Medical Society, State of South Carolina, Seneca, South Carolina.

My dear Doctor:

In order to properly meet the responsibilities of the medical profession of America in the program for national defense it is necessary to accomplish the enrollment of all eligible men of the profession in the Medical Section of the Officers' Reserve Corps.

I am sure it is obvious to you and the members of the society of which you are a member that the organization of an adequate medical reserve contemplates and re-

quires the support and encouragement of all members of the profession.

The advantages of enrollment and classification in time of peace of the body of the profession are conspicuous and include an avoidance of a repetition of the majority of the inequalities and defects which developed as result of our state of unpreparedness for the World War.

It is the desire of the War Department to organize and develop the Reserve Corps so as to provide recognition by promotion in grade and assignment to function in organizations in time of peace which will entail the minimum imposition of hardships on men called to active duty in emergency and will insure military efficiency.

In order that a better understanding of Reserve Corps affairs may be developed in medical societies, it is proposed that a military committee be appointed in each society.

The purpose of this committee will be:

(a) To establish and maintain contact with the War Department through the Surgeon General.

(b) To promote the organization of the Reserve Corps by procurement of enrollments therein.

(c) To receive information from the War Department in connection with the Reserve Corps and to convey the same to the society.

(d) To convey the recommendations of the society for the improvement of the organization and training of Reserve Officers.

In brief to establish an agency for the development of a more intimate association between the members of the profession and the War Department.

The organization of the Medical Section of the Reserve Corps is an outstanding obligation of my office and since proper organization of the medical men of the country for its defense program is a problem which concerns and I am sure interests each member of your society. I am asking a continuance of your support and suggest, if appropriate, that the proposed liaison be effected.

It is requested that this matter be brought to the attention of your society and if it is considered appropriate to organize a military committee that this be done and the names of the committee be furnished me.

Very truly yours,

M. W. Ireland,  
Surgeon General.

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## TRI-STATE MEETS IN GREENVILLE

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South Carolina in honored this year in having the Tri-State meet within its borders. Many of the best men in the Southern States are members of this splendid organization and we urge the members of the South Carolina Medical Association to go to Greenville and extend the glad hand of welcome. The following information has been sent out by the Secretary, Dr. J. H. Hall of Richmond:

"The Tri-State Medical Association of the Carolinas and Virginia will hold its twenty-sixth annual session in Greenville South Carolina, on Wednesday and Thursday, February 20-21, 1924. The Imperial Hotel will be headquarters of the Association. A session will be held morning and afternoon and also on the evening of the 20th. Only forty titles may be placed on the program and the five sessions will give ample time for each paper to be read and discussed. The Association will meet in a single section.

It is hoped that the usual preliminary exercises may be entirely dispensed with and that immediately after the Association has been called to order, the reading of the papers may begin.

The physicians of Greenville have been requested not to attempt to provide entertainments of any kind. The real business of this organization of physicians is the diffusion of medical knowledge and the entire time of the meeting will be devoted to that purpose. The Association is not interested as a body in medical or other policies, but its purpose is to make better doctors of its members.

The program is being rapidly formulated and every indication points to a splendid meeting.

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THE ORANGEBURG MEETING  
SOUTH CAROLINA MEDICAL ASSOCIATION  
APRIL 15-17, 1924.

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The meeting at Orangeburg in 1924 promises to be no less successful than all of those which have gone before. The officers have been maturing plans for many months. The program is well under way; even at this writing many titles of papers are already in hand. It will be highly gratifying to the entire profession of South Carolina to know that Dr. Bloodgood of Johns Hopkins, will deliver the address in Surgery. The names of other distinguished invited guests will be announced later.

---

WOMANS AUXILIARY

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At the Charleston meeting of the State Medical Association, the House of Delegates authorized the organization of the Womens Auxiliary. Under the splendid leadership of the president Mrs. R. S. Cathcart of

Charleston, much work has been done towards perfecting the organization all over the state. About twenty states have already followed the initiative of Texas where for several years a most efficient organization has existed.

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ANDERSON SOCIETY BANQUETS

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The Secretary-Editor attended the meeting of the Anderson County Medical Society at the Country Club January 11th and was greatly impressed with the high character of the Scientific work being done. Professor E. E. Murphy of the Medical Department of the University of Georgia delivered address of the evening on the subject of "The Progress of Medicine in the Past Twenty-five Years." This address was a literary masterpiece as well as of intense scientific interest.

About fifty doctors sat around the banquet table and the cordial fellowship was indeed inspiring to the large number of visitors. The President, Dr. G. S. Clinkscales and the Secretary Dr. Lee Milford, deserve credit for the enthusiasm of their society.



## ORIGINAL ARTICLES

### ABSCESS OF THE LUNG WITH THE REPORT OF TWO CASES

*By N. B. Heyward, M. D., Columbia, S. C.*

**DEFINITION:** A suppurative inflammation, involving the lung substance.

**ETIOLOGY:** There are two main causative factors: (1) Aspiration of foreign bodies and infective material into the bronchi and (2) the post-pneumonic. These two factors will account for at least 95 per cent of all cases. Among less frequent causes (3) bronchiectasis, (4) septic emboli, (5) rupture of contiguous areas of suppuration into the lung, as liver abscess, subphrenic abscess and empyema, (6) chronic pulmonary diseases in which secondary infection occurs as cancer, dermoid cysts, tuberculosis, sarcoma, echinococcus cysts, tertiary syphilis and others. In the past few years there have been reported a number of cases of abscess of the lung following tonsillectomy. In a series of 100 consecutive cases published by Wessler, 21 followed tonsillectomy. Twenty-eight per cent of the cases of lung abscess seen in the Mt. Sinai Hospital, N. Y., followed tonsillectomy and 16 of 54 cases seen in the Mayo Clinic followed tonsillectomy. It is interesting to note that in 25,000 tonsillectomies under local anaesthesia in the Mayo Clinic there resulted only one lung abscess.

**MORBID ANATOMY:** The abscess cavity or cavities may vary in size from one centimeter or less in diameter to one involving a whole lobe. The cavity may be single or multiple. The lesions are found  $2\frac{1}{2}$  times as often on the right side as on the left and 2 times as often in the lower lobes as in the upper. The

cavity contains the ordinary constituents of pus and usually, in addition, fragments of lung tissue. The walls of the abscess are ragged and irregular in the acute cases but are apt to be smoother and more regular in the more chronic cases. There is an early and marked tendency to the formation of connective tissue about the abscess. In the acute abscess there is a surrounding area of inflammatory infiltration. The pleura may be involved and form one wall of the abscess. The cavity often communicates with a bronchus and in this way the abscess is drained and may heal spontaneously. Or the abscess may rupture into the pleura and on draining this a cure may result.

**SYMPTOMS:** These vary with the cause and the size and the number of abscesses present. During the course of a general sepsis there may be no symptoms attracting the attention of the physician particularly to the lungs. The lesions may be only discovered at autopsy.

In the cases following a pneumonia, it may be weeks before a diagnosis of a lung abscess can be made. But the persistence of the temperature and it assuming a "choppy" character with the expectoration of increasingly larger amounts of sputum makes one suspicious of the formation of an abscess and the signs of a cavity may be made out if the abscess empties itself. In the acute abscesses a marked drop in temperature with a coincident improvement in the subjective symptoms may follow the expectoration of an unusually large amount of purulent material. Cough, dyspnoea, emaciation, pain in the chest and the expectoration of purulent sputum go with most cases of lung abscess. Clubbing of the fingers and watch-crystal nails are found in most cases which pass the acute stage. Abscesses following the aspiration



of foreign bodies are characterized by the early onset of septic temperature, cough, dyspnoea and pain in the chest. The diagnosis is made by means of the X-Ray, as a rule. The sputum in abscess of the lung undergoes a marked change. In the acute cases it is not apt to be foul but in the chronic cases the odor is very foul. The color changes, becoming grass green or dark brown. The sputum contains elastic tissue and the finding of this in sputum is said to be diagnostic of lung abscess or gangrene.

**COMPLICATIONS:** A pleurisy almost invariably is present with a lung abscess if it be near the periphery of the lung. If the abscess ruptures into the pleura, an empyaema occurs. Pulmonary haemorrhage and brain abscess are the two most common complications.

**DIAGNOSIS:** This is a disease of symptoms rather than of physical signs. The X-Ray offers the surest and quickest method of making a diagnosis in most of the cases. It must be differentiated from empyema, bronchiectasis and pulmonary tuberculosis with cavity formation.

**PROGNOSIS:** This depends upon the cause and the number of abscesses in the lung. In the multiple abscesses in a general pyaemia, the outlook is nil. Abscesses due to foreign bodies are very fatal. In abscesses following broncho-pneumonia, the prognosis is a little better. The longer an abscess persists, the greater the danger of eroding a blood vessel and a consequent pulmonary haemorrhage or of exhaustion and sepsis.

**TREATMENT:** Prophylactic. In tonsillectomy the following measures have been advised: (1) Local anaesthesia wherever possible, (2) light anaesthesia, (3) head kept low until thoroughly aroused after any general anaesthesia, (4) allow no blood or mucus to accumulate, and (5) better haemostasis in such work.

**MEDICAL:** This should be most thoroughly tried out in all cases. If it be pos-

sible to find some posture in which the abscess drains itself, this posture should be assumed frequently and the sputum coughed up. The abscess can be healed in this way in some cases. Inhalations are useful to offset the foul odor thereby improving the patient's mental outlook and desire for food. A large number recover spontaneously by emptying themselves. Bronchoscopic examinations are advocated by some to stretch the bronchi and thus facilitate drainage of the abscess. In the early stages the treatment can only be supportive and symptomatic.

**SURGICAL:** The only hope for those that do not drain themselves is surgery. In some cases where the abscess is near the periphery it can be drained by putting a tube into it. Some advocate the excision of the entire lobe which is affected. Rich of Detroit recently reported a small series of cases of acute lung abscess treated by means of artificial pneumothorax with 80 per cent of cures. This is used in cases from the second to the fourth week and the pressure should be maintained for four weeks in acute cases and much longer in chronic cases. Meyer of New York thinks that the application of differential pressure in thoracic operations to prevent an operative collapse of the lung is most important.

Report of Case 1. Mrs. A. V. H. White, 25, Married. Travels with her husband, selling aluminum ware. Her family and past history were not relevant with the exception that in February 1922 she had her tonsils removed under a general anaesthetic. A few days post-operative she developed a high temperature, cough and expectoration. These persisted except that the temperature disappeared after a month. She soon began to raise considerable amounts of sputum at a time and the odor soon after became foul. She was put to bed for about 6 weeks during July on forced feeding and gained considerable weight. When she got up the cough and expectoration soon became as bad as ever and has steadily be-

come worse. Once or twice a day she will raise 8 to 10 oz. of thick, brown colored, very foul sputum. She has lost some weight. Her appetite was good and her bowels regular. She came for examination to find out why she was still coughing up so much sputum and why it was so foul.

**Physical Examination.** The patient was a young, fairly nourished white woman. She coughed constantly, raising a thick brown sputum which was very foul in odor. Temperature 98.6, Pulse 96, Respiration 22. Her physical examination was not relevant except that her tonsils were not present, there was a very noticeable clubbing of her fingers and in the right upper anterior chest below the clavicle and high in the axilla there was broncho-vesicular breathing and a few rales on coughing. Lungs otherwise clear. Urine negative. White Blood cells 8,800, Polys 62 per cent. Haemoglobin 70 per cent (Dare). Three specimens of sputum were negative for tubercle bacilli. X-Ray showed an abscess in right upper lobe, the size of a small orange, near the periphery of the lung and at the level of the 2nd, 3rd, and 4th ribs.

A diagnosis of chronic lung abscess with a small opening into a bronchus was made and surgery advised as it seemed to be very favorable for drainage through the axilla. On Nov. 8th, 1923 a thoracotomy was done and much to our surprise there were no adhesions of the lung to the chest wall as we confidently expected. The wound was packed with gauze and six days later a piece of rib was resected and a tube put into the abscess cavity. She did badly. Eight days later the X-Ray reported an empyema on that side but a solid lung was found on the occasion of a second thoractomy. An X-Ray a week later showed the consolidation in the lower lobe to be clearing rapidly but the patient's general condition was alarming. She died two days later of a general sepsis. The pictures showed the right side of the diaphragm to

be markedly pushed up but no pus could be aspirated. Autopsy refused.

**Case 2.** E. C. White, 10, school girl. Tonsils and adenoids out in 1917. Pyelitis in 1919. Present illness started with a high temperature in August 1922. It is said to have come on gradually. Seen at that time, she had the physical signs of fluid in the left pleura. Needle put in but no fluid found. X-Ray showed consolidation of practically the entire left lung. This temperature slowly subsided and the patient put on considerable weight during this past winter. The physical signs remained unchanged. In December she had an acute attack with high temperature, cough, etc. which lasted two weeks. She was seen on March 1st, 1923 with temperature of 105, rapid respiration and constant cough. Sputum swallowed. Her physical examination was almost identical with that made in August and at various times during the past winter when she was free of fever. Her urine was entirely negative. White blood cells, 34,900, Polys 93 per cent, Hb. 80 per cent (Dare), Sputum, negative, Tbc., Tuberculin negative. We felt sure that this little patient had pus in her chest so she was put to sleep and the lung punctured with an aspirating needle 8 times in every part of the lung, but no pus was found. About two weeks later the effort was repeated and a small abscess found and drained by a thoractomy. This did not relieve the temperature, however. This patient must have other small abscesses in the lung. She is still under treatment and further needling will have to be done when her general condition warrants it.

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## BIBLIOGRAPHY

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- Osler's Modern Medicine. Vol. III.  
 American Journal Med. Sciences, September 1922.  
 Progressive Medicine, March 1923.  
 Observations on Lung Suppuration, Willy

Meyer, Archives of Surgery, January, 1923.

Monographic Medicine, Vol. II.

Lung Abscess, McCready & Heuer. Archives of Surgery, Jan. 1923.

Oxford Medicine, Vol. II.

The Principles & Practice of Medicine, Osler and McCrae, 9th Edition.

Lung Abscess, A. L. Lockwood, Archives of Surgery, Jan. 1923.

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### DISCUSSION

DR. G. H. BUNCH (Columbia):

I have had many cases of empyema to treat and am fairly familiar with it, but to the best of my knowledge this is the first case of lung abscess that I have been called upon to operate, the first case presented by Doctor Heyward. Certainly the treatment of lung abscess is that of any other abscess—drainage. We should take advantage of posture and if the abscess is on the right side, turn the patient on the left side so the abscess may drain through the bronchus. Second, do a collapse of the lung on that side, allowing the pleura on that side to be filled with air or gas and the lung to collapse, and automatically the abscess walls collapse. It would have been better if we had tried that in this case. Then of course, third, we have the radical procedure of going in and placing a tube in the abscess cavity. Here we were unable to do that at first because of the lack of adhesions between the parietal and visceral pleura, so we packed the cavity with gauze to form adhesions and later put in a tube. This drained satisfactorily, but for some reason the patient did not get well as fast as we had hoped for. She evidently had secondary pus collection somewhere. Why the diaphragm was higher on one side than on the other, I do not know. I do know we needled that side completely, and there was no abscess there, the X-Ray to the contrary notwithstanding. I do know the patient is dead, and I would almost have given my right arm for an autopsy, but we had no way of forcing the family to consent to this. I do know the abscess in the apex of the lung was thoroughly drained and there was no leakage of pus into the free pleural cavity—no formation

of empyema on that side. Later we made an opening into the thoracic wall and needled it thoroughly. This is the only case I have had of lung abscess. When we first went to drain the cavity and found no adhesions, at that time it would have been comparatively easy to remove the upper lobe of the right lung and remove the pathology, and in this way I believe we could have cured the patient.

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DR. W. R. WALLACE (Chester):

I believe lung abscesses are more common than we commonly think, or perhaps than we used to think. I was glad to believe that they were so rare that I did not take the condition into consideration until one abscess ruptured almost in my face. I have had two cases in my private practice and three in consultation, and one which I had the privilege of observing. The cases I had, the first was one in which I was unable to get an X-Ray because the patient refused to come into the hospital, and after several weeks he came in, and one morning when I was ready to go in, the abscess suddenly ruptured. The second case had a history of broncho-pneumonia. I made a diagnosis of tubercular lesion, but finally this case ruptured suddenly and recovered.

The case that was most interesting was the last one, a man who was shot in a blind tiger raid, a wound of the lower jaw that took away the sublingual muscles and also part of the trachea. A plastic operation was done, but all the while, on account of the opening in the trachea, there was a little oozing which probably caused the development of the abscess. The X-Ray showed a very definite shadow, as in Dr. Heyward's cases, but on account of the luck we had had in the other cases rupturing suddenly, we decided to try watchful waiting and conservative treatment. It finally ruptured and he got well.

In regard to posture, it is a good plan to put the patient in the Trendelenburg position and have him strain as if to vomit, and in that way he gets up some pus. The cases I had did not have foul smelling pus before rupture, nor did they have very much sputum. But of course after the rupture, there was the foul smelling pus that I do not think comes from anything else except lung abscess.



DR. JULIUS H. TAYLOR (Columbia):

I was *particeps criminis* in the last case. It has been my misfortune to have two of these cases. One was nearly tragic, and I am afraid the other is going to be tragic. A lung abscess case can be as beautiful as a sunset; on the other hand what are the possibilities? One of these cases was a woman weighing about 300 pounds, who had had a hysterectomy, and who for some two months had run a septic temperature. Finally she was sent to Columbia, and we found by the X-Ray a shadow under the scapula, made a diagnosis of lung abscess, resected a rib. And here is a little point in the technique. When you needle a lung abscess, leave your needle in place so as to have a guide to your cavity. Resect your rib, open your forceps, get astride of the needle and leave the needle in the cavity; then open the forceps and take the needle out and you have an entrance to the abscess cavity. What happened in this case where we did that? Adhesions of the lung and of the pleura following our needling opened the abscess and we got about two or three ounces of pus. We thought it was all over. The temperature dropped, but in two weeks she had an empyema. We did a resection of the rib to drain the empyema: then she had a sub-diaphragmatic abscess; drained that. Doctor Watson saw the case in consultation. Finally she got down to a haemoglobin of 18 per cent. We then told the patient it was a question of gas again, with almost certain death, and her people said they preferred to take her home and let her die. In ten days the doctor who brought her in was called suddenly—she had had a sudden rupture and recovered.

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DR. J. F. TOWNSEND (Charleston):

These lung abscesses can be treated by the bronchoscopic method, and I would advise the doctor to read up on that. Where you cannot find the pus you can look through the bronchoscope and find where the pus is.

With the use of the bronchoscope you certainly do not get recurrence between the pleurae, and you are apt to get better drainage.

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DR. C. W. KOLLOCK (Charleston): I wish to discuss this more from the tonsillar aspect. My experience would lead me to believe that much can be done to prevent

lung abscess following a tonsillar operation if we are careful in the examination of the case—first to see that there is no acute inflammation of the tonsil present, and second that there is no temperature when we operate. You will find in a great many tonsil cases that apparently are doing well, if the temperature is taken they have one-half to one degree of temperature. Time and again we have had to send these cases to the hospital for a few days until the temperature subsided. I do not operate on any case that has temperature.

Then my experience is that an operation done under a general anaesthetic is better than one done under a local. We all know we have better control of the patient under a general anaesthetic. I do not care how quiet and phlegmatic the patient is, he will to a certain extent become excited under a local anaesthetic and you do not have the control, even though you may have used a large quantity of novocaine and used adrenalin to prevent bleeding.

Another thing is the posture. So many men who operate on patients under local anaesthesia have them in a semi-recumbent posture, which of course is conducive to swallowing the blood and other material. Children of course are always operated under a general anaesthetic. In these cases my rule and custom is to operate upon them, not in a deep state of narcosis, but that they should be under sufficiently to prevent struggling and to insure control. Another thing is that the head should be hanging well back, so they cannot swallow the blood. Again, we frequently find on taking out tonsils that cheesy matter is pressed out, and if you are not careful that may be inspired. We should be very careful to remove that and not let it go down.

Some men have said that the ether apparatus we use blows septic material into the windpipe. I think that is very unusual, if it occurs. We use a suction apparatus to remove the blood, which generally takes out most of the material which comes from the tonsil, and while I do not pretend to brag, I have been operating at the Roper Hospital since the war and as yet I have not had a case of lung abscess.

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DR. T. M. SCHARLOCK (Charleston):

I had one case of lung abscess where the man would not submit to operation, but he



had a rupture and got well. Several years ago in New York Doctor ----- did several cases of lung abscess. He went down into the lung, after locating the abscess, and washed the cavity out with olive oil. He claims it forms a capsule around the cells. I saw the first case, and it was fine.

DR. N. B. HEYWARD (closing):

I want to congratulate Doctor Wallace on the luck he had in his cases. I tried to get these cases to drain, but they would not, so something had to be done.

Those who have been using the bronchoscope seem quite enthusiastic over it, and it does seem to me there might be something in it. The cases that drain early as a rule do not need a bronchoscope. But some do not drain, and then we have to do something.

## BLOOD TRANSFUSION IN SURGERY

By D. L. Maguire, M. D., Charleston, S. C.

The evolution of blood transfusion presents an interesting history of alternate success and failure. Numerous instance have been recorded, where from earliest times the mind of man has been fired by the possibility of restoring health, vigor and youth to the aged and infirm by the injection of blood from the young and healthy. Wonderful possibilities offered themselves and there has been no paucity of investigators but insurmountable difficulties presented themselves and so the operation was not placed upon a practical basis until later years. As was aptly expressed by an English writer "Transfusion is a sort of Will of the Wisp of Science, holding out the most brilliant prospects but never seem to be realized."

In 1492 the lives of three doners were sacrificed in an attempt to prolong the life of Pope Innocent VIII by transfusion which was unsuccessful. A. H. Mathews flatly denies this occurrence in "The Life and Times of Rodrigo Borgia. In speaking of this, Mathews states that the idea of trans-

fusion could not occur to anyone to whom the circulation of the blood was unknown and secondly that the phenomenon of the circulation of the blood was not discovered until the seventeenth century. There are no convincing records of any transfusion being done before William Harvey's important discovery of the circulation. It was not until 1616 that Harvey presented his views to the College of Physicians and it was 1628 when he published his treatise on *Motion of the Heart and Blood*.

In medical literature, mentions are made of transfusions by an Italian physician Francesco Folli in 1654 and by Daniel of Leipzig in 1664 but most historians give the credit to Wren of conceiving the idea of using infusions in bloodvessels, and to Richard Lower of England and Jean Denys of France of being the first to really carry out the procedure. Lower carried out the first transfusion on dogs in 1665 and in 1666 Denys first sucessfully transfused a man by using lambs blood. Lower used a cannula and connected the artery of one animal to the vein of another.

There then followed many years of use and disuse, of success and failure and of petty jealousies. That the failures were far greater than the successes can be seen in the action of the French Government, which forbade the procedure until the Faculte of Paris should give its approval. This was not obtained and for more than a century the practice of bood transfusion was given up.

During the years from 1817 to 1863 Medical history records the names of Blundell, Sheele, Diafenbach, Dumas, Prevost, and Bischoff as being most conspicuous in propagating knowledge of blood transfusion. During this period the use of defibrinated blood came into vogue and was used quite extensively. During the Franco-Prussian war 37 transfusions were reported. All of these were done with defibrinated blood and 13 were successful. Geselius and Hesse in 1874-1875 respec-

tively advised the use of animal's blood for transfusion, lamb's blood generally being used.

From 1863 to 1884 transfusion was supposed to be a "cureall". It was not until Landois in 1875 demonstrated that the red cells of one species when injected into a different species of animal are destroyed that all attempts at transfusing with heterogenous blood cells were discarded. Likewise also it was pointed out by Kohler in 1877 that the use of defibrinated blood, even from animals of the same species increased the danger of transfusion, because of the excess of Fibrin ferment injected and hence the increased tendency of intravascular clotting. After this time, blood transfusion was abandoned as a therapeutic measure and from this time up to the beginning of the present century, transfusion was mentioned in medical literature chiefly as a matter of historic interest.

In 1898, Crile of Cleveland began a series of experiments which marked the introduction of transfusion as a safe and valuable therapeutic procedure. He began by using arterio-venous suture, which originated through the work of Payr and Murphy. He later adopted the ring-cannula method, first suggested by Nitze in 1897 and carried out by Payr in 1900. Jensen, in 1903, experimented with several methods, and in his report favored suture technic. Hopfner in Von Bergemann's clinic 1903 used the ring method in twenty-eight cases and concluded that it was inapplicable to vessels smaller than 3 MM in diameter. The technic of vascular anastomosis became so perfected through the work of Carrel of the Rockefeller Institute that this method came into vogue. Crile's cannula was modified by Janeway, Elsberg, Soresi, Bourkeim and Levin. Elsberg's modification was the best.

In 1914 and 1915 Hustin, Agote, Weil, Lewisohn, Rueck and others working independently of each other published articles recording experiments and clinical applica-

tion of transfusions performed with citrated blood. Hustin's article appeared August 6, 1914. He mixed the blood with equal parts of isotonic (5%) glucose solution to which was added 20 cubic centimeters of blood glucose mixture. He claimed that citrate of soda impaired the oxygenating property of the blood and the addition of glucose was necessary to overcome this. He reported experiments and one clinical application in a man. The first transfusion performed in man by blood rendered incoagulable by the addition of sodium citrate alone was performed by professor L. Agate of Buenos Aires on November 14, 1914. He employed one grain of neutral sodium citrate in 25% solution for every 100 cubic centimeters of blood. Weil observed that citrated blood augmented the coagulative properties of the recipient's blood. From the work of Lewisohn in determining the proper dosage of sodium citrate which can be used with safety, there has developed a method which "unites four advantages in Surgery of extreme importance—facility, rapidity, efficacy and security and which fulfills in every detail the requirements of the ideal. The indirect citrated method of blood transfusion stands today then as the method of choice. Pemberton of the Mayo Clinic whom I have quoted freely in this paper, used the citrated method in 1001 cases out of a total of 1036 transfusions.

Among the indications which from our experience, we have found this form of treatment most useful are the following:

*Hemorrhage*—There is, of course, a very specific indication for blood transfusion in every case of severe hemorrhage and it is in these cases that the most brilliant results have been observed. In post operative hemorrhage, in post partum hemorrhage, in ruptured extra uterine pregnancy, in hemorrhage following abortions and miscarriages, in intra thoracic hemorrhage from gunshot wounds or stab wounds, in severe accident cases with copious loss of blood,

gastric or duodenal ulcers bleeding, transfusion is especially indicated and particularly successful. As Mortimer Percy states," in fact bleeding from any source which cannot be easily controlled by mechanical means is best controlled by transfusion of blood."

This same observer says that "Nature attempts to control hemorrhage in two ways (a) by producing a fall in blood pressure and (b) by attempting to cause a clot at the end of the bleeding vessel. The supposition however that the rise in blood pressure following a blood transfusion will increase the hemorrhage seems to have no foundation in fact. In bleeding from a gastric or duodenal ulcer, even when the hemorrhage is very severe, it will almost invariably cease immediately following the transfusion. It is in severe hemorrhage that large amounts from 600 to 1500 cc are given. The transfusion of amounts less than 600 cc has not in our experience been sufficient to control such cases. We have also noticed that amounts greater than 900 or 1000cc do not produce more satisfactory results than the giving of 600 to 800 cc and repeating one or more times. This amount seems to be best suited both to replace the lost blood and to favor clotting at the bleeding point."

*Icterus*:—Those patients who are jaundiced from obstruction of the common duct are bad surgical risks. Soon after operation these patients gradually grow weak, bleed from the wound and slip out of our hands without any very decided cause. Both before and during operation these patients should be transfused and by so doing they will be transformed from hopeless cases into fair surgical risks.

*Secondary Aenemia*:—Produced by diseases which are characterized by a slow persistent oozing of blood from any part of the body. Intestinal bleeding, epistaxis, hemorrhoids and hematuria from various causes. These diseases not only cause a constant diminution of the hemoglobin and drop in the cell count but an actual destruc-

tion of the red blood cells from an infective or toxic process. In these cases it is wise always to transfuse before attempting any operative procedures, particularly if the red cells are 1000000 and 20% hemoglobin. Various "rules o'thumb" have been offered based upon the blood pressure readings and haematologic estimates indicating when to transfuse and when it is safe to wait. Dorrance considers it is imperative to transfuse when the count falls to 1000000 and 20% hemoglobin or below and optional when the red cells are 1,500,000 and hemoglobin 25%. Depage studied wounded soldiers and found that when the red cells fall below 4,500,000 in 3 hours, 4,000,000 in 8 hours or 3,500,000 in first twelve hours, the patient will probably die unless transfused. Others have considered the blood pressure readings as the most reliable indicator, pointing out that systolic pressure below 80 MM Hg. meant danger.

*Hemophilia*:—This disease is characterized by a greatly delayed clotting time so that small abrasions or cuts may bleed indefinitely. These cases if known before operation from any previous history, after operation should be transfused, giving as much as 700 or 800 cc of blood.

*Pernicious Anemia*:—Soresi a few years ago, classed this disease with malignancy as being the two diseases in which blood transfusion was absolutely contra indicated. He was of the opinion, presumably that the destruction of the patients blood was more or less continuous and hence the operation would do no good. The conclusions of Ardubald however, who made an extensive study of these cases, were that the vast majority of these patients, except those who had reached the last stages of this disease, would receive immediate benefits by blood transfusion. Along with a series of blood transfusions both before and after operation he suggested Splenectomy. In the Mayo clinic during three years, there were 657 transfusions done for Pernicious Anemia and Splenectomy was performed in 30 of the 185 cases.

*Septic Conditions*:—Of late there has



been reported numbers of cases of Septicemia and Sappremia which have not only been improved but cured by blood transfusion. The injection of fresh blood from a suitable donor furnishes new antibodies and fresh cells, which adds the necessary stimulus and enables the resisting process to assume the upper hand. Nelson M. Percy states that "we have seen several cases of septicemia following pelvic cellulitis postpartum infection and peritonitis in which the process has gone on to a practically hopeless stage and in which blood transfusion was resorted to as a last measure. Several of these cases were definitely improved and a few of them recovered."

*Acute Surgical Shock:*—Patients who will require a serious operation such as in Carcinoma of Pylorus or Carcinoma of the Intestines, and who are markedly Cachectic and generally weak and who are bad surgical risks, can be greatly improved by blood transfusion so as to greatly decrease the danger of the operation. Several transfusions should be given these cases a week or ten days before operation, and this will sometimes render a poor surgical patient a fairly good one." Likewise after a long tedious severe operation the administration of a pint of blood just after the operation is finished and while the last sutures are being applied, will make a change that is often quite remarkable. A marked improvement of the general condition of the patient is evidenced by a better surface color, a strengthening of the heart action and a drop in the pulse rate of from 30 to 50 beats per minute.

There is no doubt but that when blood transfusion was first suggested, it was used in many cases where it not only did no good but actually did harm. The cases were not well selected, grouping and typing were unknown, air embolism was common on account of poor technique and hence a large number of fatalities occurred. Today however in many cases, we know that the injection of fresh healthy blood to one patient from another individual may not only

cure the pathology present but act absolutely as a life saving measure. To my mind, blood transfusion now a days rests on a firm therapeutic foundation and no Surgeon is justified in ignoring this procedure in suitable cases, no matter how desperate they seem to be. A miraculous change frequently occurs in a patient after a transfusion. However we should not make the mistake of delaying too long in deciding on this step because the possible shock of this operation should not be of any greater intensity than an injection of normal salt solution. A possible, and we must confess a reasonable criticism which has been directed against blood transfusion is the time consumed in grouping, typing and probably doing a Wassermann when we have an emergency case which requires an immediate transfusion. This objection is a real one and yet it has been stated that we are justified in transfusing without the preliminary typeing and grouping of the blood of the donor in the face of real emergency. However, I believe, that in future years; as blood is studied and understood more and more as regards its coagulability and length of life, syringe fulls of blood will be kept in our laboratories ready for instant use.

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## TETANY

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*By L. B. Salters, M. D., Florence, S. C.*

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Tetany is regarded by most authorities, not as a disease but as a condition—a condition of hyperirritability of the nervous system—a condition in which response to stimuli, especially mechanical and electrical, is greatly in excess of the normal. A peculiarity of this hyperirritability is that it may exist in a person without giving the least evidence of its presence, and there are no statistics on the subject to indicate the number of persons so affected. However, upon suitable provocation tetany does tend to manifest itself, and these manifestations

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are sufficiently definite to be classified and described.

There are thus two forms in which tetany may exist—the latent and the active. Latent tetany is nervous hyperexcitability without symptoms. Active tetany is hyperexcitability with symptoms. While the latent form is symptomless, like a sleeping volcano it may break out into activity at any moment, spend itself, and return to its former quiescent state with as little warning as it gave at the onset of activity. Moreover, during latency, it is nearly always possible to elicit Erb's Phenomenon, and it is sometimes possible to obtain Trousseau's. These phenomena are diagnostic, occurring in no other condition. Chvostek's sign is less reliable. As will be mentioned later, Erb's sign is pathognomonic only in children under five years; after five, it is a sign of health and not disease.

**ETIOLOGY:** The cause of tetany is not thoroughly understood. Most authorities are agreed, however, that an essential factor is a disturbed relationship between the Na and K ions of the plasma on the one hand and the Ca and Mg ions on the other. Normal nervous activity occurs only when there is a physiologic equilibrium obtaining between the stimulating Na and K ions and the depressing Ca and Mg ions. Any disturbance in the relative proportions of these elements results in abnormal nerve activity. When there is a decrease in the calcium ions or a relative increase in the Sodium ions, the nervous system becomes hyperexcitable and constitutes tetany. Inasmuch as calcium metabolism is controlled by parathyroid secretion, whenever the plasma is deficient in calcium, it is presumed that the parathyroids are hypoactive. The presumption accords thoroughly with the well known fact that either surgical removal of the parathyroids or their destruction by the Roentgen ray always results in a greatly reduced Ca content of the blood stream.

The fact that injections of guanidine produce symptoms of tetany does not relieve

the parathyroids of the charge of being the chief offending agents, for one function of the parathyroid secretion is to protect the body against the toxic effects of guanidine and its derivatives, and only when the secretion is relatively deficient does guanidine accumulate sufficiently to produce the degree of hyperirritability denominated tetany.

Tetany may occur at all ages but tends especially to occur between the ages of six and twenty-four months; the next most likely period is during late adolescence from the seventeenth to the twentieth year. After the twentieth year it seems to be related to occupations, diseases and conditions rather than to age.

**FORMS:** In classifying the varieties of tetany, it is most serviceable to separate them into the Infantile and the Adult. The infantile forms consist of four distinct manifestations of the disease, the four manifestations being: 1st, General convulsions; 2nd, Carpopedal spasm; 3rd, Laryngospasm; and 4th, Expiratory apnea. The adult group is not divided according to different types of activity but is classified according to the disease, occupation or condition the tetany complicates. Thus there are seven groups. First, Idiopathic; Second, Tetany of gastric-intestinal disease; Third, Tetany of acute infection; Fourth, Tetany of poisoning; Fifth, Tetany of maternity; Sixth, Tetany of parathyroid removal or destruction; Seventh, Tetany of nervous diseases.

**EXPLANATION OF FORMS:** Infantile tetany usually develops between the ages of six months and two years and is so frequently associated with the milder forms of rickets as to create the suspicion that if there were no rickets there would be no tetany in infants. On the other hand, extreme degrees of rickets are practically never complicated with tetany. Nevertheless, it remains true that tetany almost never appears in an infant in whom evidences of rickets cannot be demonstrated if carefully looked for. The presence of rickets, there-

fore, may be taken for granted in all cases.

(1) The most common type of infantile tetany is probably the latent which remains unrecognized until it becomes active.

(2) General convulsions is by far the commonest manifestation of the active form. The importance of this type is indicated by the fact that ninety per cent of all convulsions occurring under two years of age is due directly to tetany. It is appalling that this condition should thus produce in early life nine times as many convulsions as all other causes put together. Yet this is true, in spite of the fact that it is not generally recognized.

The convulsions are usually epileptic in type, but differ from epilepsy in that tetany is prone to produce frequent recurrences, while epilepsy tends to occur infrequently. Barring status epilepticus, and certain convulsions of evident causation, several convulsions a day mean tetany, while a single convulsion every several days or every month is more likely to be epilepsy, though epilepsy should rarely be diagnosed in a child under five to seven years. It should be emphasized here that children with latent tetany readily develop convulsions under stress of intestinal intoxication, fever, acute infection, unusual excitement and during states of malnutrition, and the spasm is not often recognized as tetany. For instance, one child has a spasm from a temperature of 103, another bears 105 without inconvenience. Two children have intestinal intoxication from eating unripe fruit. One has convulsions, the other has none. Two children with severe diarrhea develop acidosis and are given sodium bicarbonate intravenously. One goes into convulsions and dies, the other is improved. Such facts as these face and puzzle every physician who deals with children at some period of his professional career, and the question that forces itself to the front is why the difference between these children? Why does the one have a convulsion and the other not have it? The most likely explana-

tion is that the one had tetany and the other did not.

When the convulsion occurs, there is nothing characteristic about it which it can be recognized as tetany. It may be limited to one part of the body or it may be general. It may last a few seconds or a few minutes, but once over the infant returns immediately to consciousness and is soon normal again. This early return to consciousness and normalcy is very very common in tetany, and uncommon in convulsions from other causes, there is usually some symptom or sign present to indicate the cause.

The second form of active tetany in a child is carpopedal spasm, which is pathognomic. In no other condition or disease does this type spasm occur. It varies in degree but in its fully developed state, it is typical. The arms are flexed at the elbow to a right angle, the wrists are strongly flexed, while the fingers straight, stiff, and held rigidly together, bend on the palm, with the thumb pressed against the index finger or palm—the whole forming the “obstetrical hand.” In addition, the legs are straight and stiff, the feet in extension and toes flexed on soles, with involved muscles hard, tense and painful. The spasm is tonic in character and may be intermittent or continuous. It may last a few seconds or a few weeks. Consciousness is undisturbed as a rule. The spasm may spread to the muscles of the jaw, face, thorax, or abdomen. The contractions are usually bilateral, symmetrical, tonic, painful, limited to voluntary muscles and often associated with paraesthesias of the extremities. When the face is affected, the angles of the mouth are depressed and forehead wrinkled, constituting the “tetany face.” The lips often pout and make the “carp mouth.” Tremors may accompany the spasm and rarely the spasm may be unilateral. Incomplete forms sometimes appear as cramps. Should these occur in deep water the life of the swimmer would be endangered.

The third type is laryngo spasm, which occurs alone, as well as in association with general convulsions or carpopedal spasm. When severe, this is a dangerous condition. It is fortunately not common. The spasm narrows or closes the glottis. The mild form is recognized by exaggerated breathing with crowing sounds on inspiration. In the severe form, the glottis closes suddenly and firmly; respiratory obstruction is complete; no air passes to or from the lung; the child becomes affrighted and agitated and vainly makes violent efforts to breathe; cyanosis develops; efforts at respiration rapidly grow more and more feeble; unconsciousness sets in to be speedily followed either by pallor and death, or by a sudden relaxation of the glottis with rapid re-establishment of normal respiration, the first inspiration producing a loud crowing sound. These attacks may be repeated several times a day, or once every several days. They are usually brought on by some form of excitement or mechanical stimulation such as anger or fright or a whipping.

Lastly and fortunately most rarely "expiratory apnea" may abruptly appear. This is due to a spasm of the diaphragm and other muscles associated with it in respiration. In it, breathing is rendered impossible, not by reason of obstruction anywhere in the air passages, but by reason of fixation of the chest wall by the strongly contracted respiratory muscles. The child cannot even make an effort to breathe. His chest is as motionless as a statue. Any interchange of gases between the pulmonary air within and the atmosphere without can only take place by the process of diffusion and such interchange is too insignificant to do more than simply prolong the agony incident to suffocation. Evidently then, unless there is speedy relaxation, cyanosis, unconsciousness and convulsions set in and mercifully put an end to the agonizing scene by extinguishing all that remains of the already faintly glimmering spark of life.

1. Coming to the adult forms of tetany, the first in order is the idiopathic. This form occurs in otherwise healthy individuals, commonly between the ages of twenty and thirty. At present, it is wholly a European condition confined chiefly to shoemakers and tailors but occasionally invading other occupations. It is endemic in Vienna, Paris, and other cities of Europe. It is frequently epidemic during the first three months of the year, and tends to recovery on change of occupation. Beginning with paresthesias in the extremities there soon develop typical cramps in the arms and legs.

2. Tetany of gastro intestinal disease most frequently complicates dilatation of the stomach.

3. Mild outbreaks of tetany occur in acute infections. There is usually only one spasm during the course of the disease.

4. Tetany sometimes complicates poisoning by lead, ergot, morphine, cocaine, and novocaine.

5. Tetany of maternity is more common than is recognized. It may occur at any period of pregnancy or lactation, but is most common between the sixth and eighth months, especially if these months coincide with the tetany months of January February, and March. Once established during pregnancy it is prone to persist till delivery and tends to recur with each succeeding pregnancy. This form is liable to be mistaken for eclampsia.

6. Tetany may be the only symptom of surgical removal of the parathyroids or their destruction by the roentgen ray.

7. Such nervous diseases as epilepsy, brain tumor, hyperthyroidism, and hypothyroidism are in rare instances accompanied by tetany.

PROGNOSIS: In spite of its life-threatening tendencies and the frequency of its occurrence, tetany is seldom fatal in children. However, death does occur, and sometimes



without even the warning of a spasm. Laryngo spasm may be fatal in a few seconds. A child may die in a convulsion or expiratory apnea. Usually, however, the outbreaks do not produce death, and if they continue to occur the attacks become less and less severe as the child grows older, tending to cease about the fourth year, or earlier.

In adults, the idiopathic form recovers spontaneously on change of occupation, and remains cured until the occupation is resumed when a new outbreak is liable to occur.

The tetany of maternity should always be regarded as serious, regardless of the mildness of the symptomatology. In cases of poisoning tetany scarcely influences the prognosis one way or the other. In nervous diseases, it disappears upon recovery from the disease. The outlook is not good in tetany complicating gastro intestinal disease unless the gastro intestinal condition can be remedied. In the acute infections the prognosis is good. Destruction of the parathyroids by Roentgen ray, or their surgical removal, is followed by a very grave form of tetany.

**DIAGNOSIS:** In the matter of diagnosis, carpopedal spasm is pathognomonic whether in child or adult. It occurs in no other condition. In latent tetany the recognition of the condition depends upon two features: First, ability to elicit Erb's or Trousseau's sign and Second, a marked diminution of the calcium content of the blood plasma. No convulsion occurs in tetany until the normal blood calcium ions have been reduced at least 30%. This is at least true in children. A convulsion appearing in a child with a blood calcium reduced less than 30% is not due to tetany. In children under five years, Erb's sign is diagnostic; in older persons, Trousseau's sign has to be depended on, though it cannot always be elicited even in frank cases of tetany; when present, however, it is diagnostic. In active tetany the con-

vulsion or laryngo spasm or expiratory apnea with an Erb's or Trousseau's phenomenon is diagnostic. The only feature that is common to all forms of tetany is the great reduction in the calcium content of the plasma. This is even more marked than in rickets. In active tetany in a child, the plasma may contain only 50% of its normal amount of calcium.

**TREATMENT:** The treatment of tetany is to be distinguished from the treatment of the disease to which the Tetany is secondary. If the parathyroids are removed or destroyed, effort should be made to supply parathyroid secretion to the body or to transplant parathyroid glands. If gastro intestinal disease is the primary cause, the disease must be remedied by appropriate treatment. So far as the tetany itself is concerned the treatment is simple. The latent form requires only two drugs, calcium and cod liver oil. Calcium Chloride in ten grain doses every four hours, and continued five or six months, is very effective. In addition, a pure cod liver oil should be administered in ten minium doses three times a day for the same length of time. In case cod liver oil is not available, or cannot be retained, it may be replaced by egg yolk. The yolk of one egg corresponds to 45 minims of cod liver oil. Egg yolk and cod liver oil contain something that enables the organism, when its calcium content is running low, to assimilate and hold calcium salts. The calcium salts are of only temporary benefit without the egg or oil. The purpose in giving the egg or oil, therefore, is solely to enable the body to utilize the calcium salts administered.

In active tetany only one drug is required to reduce it to latency and that is epsom salts. It is used in a 50% solution or 240 grs. of pure magnesium sulphate to the ounce of water. The solution is boiled and injected subcutaneously. The effect of epsom salts is simple depression, so that it does nothing but relieve the active symptoms



of the tetany. In other words it simply stops the convulsions. As epsom salts is eliminated through the kidneys, when given hypo-dermically, it is important to know that the kidneys are healthy when it is so administered. In renal disease the toxicity of the salts may be twice that of the drug in health. The special danger to be guarded against in its administration is paralysis of the respiratory centre. In case respiratory failure is threatened as indicated by irregular and shallow respiration with increasing cyanosis it can be prevented by injecting intravenously calcium chloride in one per cent solution. The dose of calcium chloride should be sufficient—ordinarily between three and ten grains. As soon as respiration is reestablished, the calcium solution must be stopped else it will neutralize the whole depressing effect of magnesium salts and allow the convulsions to return. The dosage of the magnesium sulphate is as follows:

Under six months 20 minims of the 50% solution should be given subcutaneously every four hours until the convulsions cease.

From six to twelve months, the dose is 30 minims of the same solution given the same way at the same interval. This is probably dose enough also for the second and third years and needs to be doubled only in the case of adults.

These doses are safe and there are no undersirable after effects, as for instance, when morphine is used. Being given hypo-dermically, no danger is to be anticipated from delayed absorption as in case of the rectal administration of chloral hydrate. And lastly, in case of over-dosage, a dependable antagonist is available in calcium chloride

## THE MODERN MANAGEMENT OF DIABETES MELLITUS

*By J. Heyward Gibbes, M. D., Columbia, S. C.*

There is no condition which the modern physician is called upon to handle that more effectively rewards the virtues of the student or confounds the ignorance of the loller than does diabetes. In the 17th. century Franciscus Sylvius observed the sweetish taste of the urine in diabetes mellitus, and established this feature as a differentiating one between this disease and diabetes insipidus, an observation which might be looked upon as having started in slow motion a train of thought which has gathered in mass and momentum as the years rolled by, until, during the past decade, we have witnessed the subject grow to colossal dimensions and present phases and problems that have taxed our energies to keep informed about and solve. In no branch of medicine have the efforts of the research worker and the clinician been more beautifully coordinated, and none has served better to establish the dependence of the latter upon the former. We have progressed to the point of a quantitative understanding of physiological processes, we have learned of tissue changes that modify the ability of organs to perform their functions, we have succeeded in understanding the analytical and synthetic chemistry of foods, we have discovered the adjustments which are necessary between the quantity and quality of foods and the limitations of metabolic function, and we have learned that artificial props, in the form of extracts from healthy organs, may be utilized to bolster up a failing function. These accomplishments represent arduous work by a host of investigators and clinical observers; they mean conscientious study for

those of us who would apply their principles.

All students of the subject are agreed that diabetes is on the increase, both as regards its incidence and in the number of deaths resulting from it. Allen calls attention to the fact that German hospital statistics showed that in thirty years the total number of patients had increased 3.3 times while the number of diabetic patients had increased 19 times. Statistics in this country in matters of this kind are notoriously unreliable because of the inaccuracy inherent in the Vital Statistic Bureaus of many of our states. However, it is interesting to review the figures as presented by Joslin<sup>3</sup>. He calls attention to the fact that in 1880 the diabetic death rate was given as 2.8 per 100,000, and that there was a steady increase until 1915 when it was recorded as 17.5. In 1920 the diabetic death rate was estimated as 16.1 per 100,000. Irrespective of the comparative thoroughness of the vital statistics of the different periods, it is evident that there has been a pronounced increase in the disease. Dr. Osler<sup>4</sup> was of the opinion that this increase was largely due to better observation on the part of physicians, improved methods of diagnosis, and more complete records. But there is good reason to believe that these are not the only factors concerned, and that a considerable part of the apparent increase is real. As Allen remarked in 1914, "present prophylactic methods have not prevented an increased incidence of diabetes, and present therapeutic methods have not prevented an increased death rate."

These facts are interesting in themselves, and are especially important when we view them in the light of possible criticism of the rank and file of the medical profession. In careful hands the average length of life of the diabetic has been extended. Joslin<sup>5</sup> points out that in the city of Boston between the years of 1895 to 1913 the average dura-

tion of life in the fatal cases of diabetes was 3.3 years, for 1915 it was 4.3 years, and in 1920, 5.3 years. This indicates sharp improvement with improving methods of treatment. The question arises whether similar improvement is not attainable over the country as a whole if the medical profession will keep itself informed of the advancing methods for the treatment of this disease. The same applies as to the incidence of diabetes. A proper understanding on the part of the public of the factors that predispose to diabetes must inevitably result in its decrease. The problem would seem to be simply that of having them informed. It is upon the medical profession that this duty must devolve.

In this connection it is interesting and instructive to review the vital statistics in our own state as applied to diabetes. The bureau was established in South Carolina in 1915. In 1916 <sup>6</sup> diabetes was reported as having been the cause of death in 74 cases, representing a death rate from this disease of 4.6 per 100,000. In 1920, <sup>7</sup> 105 deaths were reported, or 6.1 per 100,000, while in 1922, <sup>8</sup> 109 deaths were recorded, giving a rate of 6.3. On the basis of these figures alone, one would conclude that diabetes was the cause of death in South Carolina much less frequently than in the United States as a whole. Of course we know that this is not true. The discrepancy represents a failure on the part of our physicians to recognize the disease, and consequently impairs the value of our vital statistics. This of course means that we are losing the opportunity of applying the increasing knowledge that is being gained about the disease, and that our patients are being denied the treatment which they should receive. Nor can we escape another inevitable conclusion based upon these facts. If our physicians are not keeping themselves sufficiently informed to recognize diabetes as a cause of death, they cannot be sufficiently well

versed in matters pertaining to metabolic disturbances and the principles of dietetics to make it possible for them to recognize potential diabetics, and to instruct them in a mode of living which would protect them against the development of the disease. It is only by facing facts of this kind squarely that we can hope for improvement; an attempt to combat them will tend to perpetuate ignorance.

Joslin<sup>9</sup> has pointed out in a most forceful way the importance of overweight in the development of diabetes. In an analysis of 1000 diabetics he found that none had developed the disease when they were 31% or more below the normal weight for their height and age, while there were 273 patients who were 30% or more above the normal weight. Aside from certain disorders of metabolism, sedentary habits and hyperalimentation are, of course, the outstanding causes of obesity, and must inevitably be looked upon as the chief predisposing factors in the production of diabetes. It is customary to refer to the frequency of diabetes in man and wife, to the racial predisposition of the Jews, to its relatively large incidence among mental workers, in people of the same family, gouty patients, etc. But Joslin simply points out that in all of these instances overeating or physical inactivity, or both, are almost certain to be encountered, and probably play a much more important role than any other common factor that may be discovered.

The relation of the pancreas to diabetes has now been clearly established. It is known that glycosuria and hyperglycaemia may result from injuries in the floor of the fourth cerebral ventricle, and might at times be due to disorder in hepatic function. But there is no longer doubt that the disease, diabetes mellitus, is associated with, and almost certainly produced by, the failure to function of certain specific cells in the pancreatic structure. As early as the

17th. century, Brunner<sup>10</sup> excised the pancreas of a dog, and observed that the animal developed an excessive thirst and polyuria. In the middle of the 19th. century Claude Bernard<sup>11</sup> conceived the idea of the internal secretions, and laid the foundation on which our knowledge of these functions is largely based. His work on the pancreas was confined to a study of its external secretion, but he gave us the idea from which our knowledge has developed. Minkowski and von Mering,<sup>12</sup> toward the close of the 19th. century, produced diabetes by the excision of the pancreas. In 1901, Opie<sup>13</sup> demonstrated the lesions in the islands of Langerhans, and it is from this point that the true conception of the disease really began. The work of Allen<sup>14</sup> has placed the subject on a sound experimental basis. He was able to demonstrate that at least seven-eighths of the pancreas of the dog must be removed in order to produce mild diabetes, that if one-ninth of the gland were allowed to remain, moderately severe diabetes resulted, and that when only one-tenth was left, the animal developed the disease in severe form. By these methods he was able to demonstrate clearly the hydropic changes which occur in the alpha cells of the islands of Langerhans, thus advancing to a much more definite conception of the pathological basis of the disease. Further, Allen's<sup>15-16</sup> experimental work placed the dietetic management of diabetes on a definite basis, and gave us a clearer conception of the causes that produce acidosis and the means by which this condition can be prevented and treated. It is interesting to note that he was able to produce potentially diabetic dogs, and to prevent the development of the disease by rigid dietetic control, that he could cause acidosis by the excessive feeding of fats, and relieve it by a readjustment of the diet. Finally, Banting<sup>17</sup> and his associates have succeeded in obtaining an extract of the internal secre-



tion from the islands of Langerhans that has proved efficacious in supplanting a deficiency of this substance in living animals.

The diagnosis of diabetes is too often looked upon as a simple matter. As a matter of fact there are many pit-falls to be encountered and many safeguards that are necessary to protect us against them. The report which the page made to Falstaff concerning the doctors examination of his urine is worthy of thought: "the water itself was a good, healthy water, but for the party who owned it, he might have more disease than he knew of." Again, it has been wisely observed that "the urine is the physician's whore, for she cozens him". These observations are true today, and find their application with remarkable force in connection with the diagnosis of diabetes.

Joslin advocates the safe attitude of considering any demonstrable sugar in the urine as indicative of diabetes mellitus. This is very well as far as it goes, but there is little doubt that in very rare instances sugar may appear in the urine without an associated hyperglycaemia, that the normal renal threshold for sugar may be lowered, or that a transient hyperglycaemia with glycosuria may result from an excessive ingestion of readily available carbohydrate food. In other words, one is not justified, in the light of our present knowledge, in arriving at a positive conclusion concerning the significance of sugar in the urine without determining the associated percentage of sugar in the blood and without informing himself with regard to the quantity and quality of food that has been taken before the specimen was obtained.

It is theoretically possible for a true diabetic to have a normal, or subnormal, blood sugar and continue to eliminate sugar in the urine. This is hypothecated for hydraemic diabetics,<sup>18</sup> where the tissues have become water-logged, and the blood diluted. In cases of this type little confusion need

arise because of the conflicting evidences in the blood and urine. The general situation will render a crying confirmation of the urinary findings.

Much more important is the converse of the above condition, the failure to find sugar in the urine when the blood sugar is above normal. When the blood sugar level is maintained above the normal over a long period of time, or in the presence of disease of the kidney, the renal threshold for sugar, is frequently elevated. In cases of this type, negative urinary findings may be disastrously misleading, and it behooves us to keep these possibilities ever in mind. It is only in this way that we can protect our patients against serious errors. Dr. Hamman<sup>19</sup> has called attention to the likelihood of mistakes resulting from the custom of asking patients for specimens of urine voided upon rising in the morning. This is the specimen, of all others, least likely to contain sugar because it is farthest removed from eating. It is an excellent plan to routinely require patients to bring specimens of urine that have been collected two hours after the largest meal of the day.

I have been very much interested in finding sugar in the urines of pregnant and nursing women. It is generally believed that pregnant women may show true glycosuria as a temporary condition, returning to normal after the pregnancy. I have had an unusual opportunity of observing this condition in one of my patients, a woman, 35 years of age, whom I saw first in 1917, at which time she was 3 months pregnant. Her urine contained as much as 3.5% of glucose, and this was controlled with difficulty by dietetic restrictions. After the delivery, during the period of lactation, her urine showed an abundance of lactose, and I doubted my former finding of glucose. After lactation, this patient refused to remain on her diet, ate freely of all foods, and her urine remained free of



sugar. Since that time I have had an opportunity of observing her in two other pregnancies, and have noted exactly the same train of events except that the last pregnancy was interrupted, and we did not reach the stage of lactosuria. The finding of lactose in the urine of a nursing mother is not to be looked upon as abnormal. This sugar produces a delayed and atypical reduction of the copper solutions, and is not fermented by yeast. I have found it so often as to regard it as a commonplace matter.

Rigler and Ulrich,<sup>20</sup> Hamman,<sup>21</sup> and others have made careful observations of the behavior of the blood sugar curves that follow the injection or ingestion of known amounts of glucose in normal and diabetic subjects. It has been found that, following the administration of 100 grams of glucose by mouth, the blood sugar of the normal person rises sharply, and rather precipitately declines, returning to the normal level in two hours time. In the diabetic, the blood sugar rises, and its return to the level which was found to precede the administration of the glucose is delayed. This type of curve has been reported as occurring in hyperthyroidism, and this condition must be taken into consideration in interpreting the findings. However, whenever a tendency to a delayed fall of the blood sugar is encountered, the patient must be looked upon with suspicion, as possibly representing a potential diabetic. It is believed that this method of studying patients in whom we have reason to suspect the possibility of diabetes will assume increasing importance in enabling us to warn these people of the dangers ahead of them.

The primary disturbance in diabetes consists in an inability to properly utilize carbohydrate foods. This varies in degree with the severity of the disease. This much of the problem was recognized by Rollo, in the latter part of the 18th century, when he instituted the treatment of eliminating prac-

tically all foods except those of animal origin. Various modifications of this low carbohydrate and high protein and fat diet prevailed in the management of the disease up to the time of Allen's epoch making work when the associated impairment of protein and fat metabolism was clearly established. The work of Allen, and that of other investigators which largely followed from his, also pointed out the grave dangers incident to the excessive ingestion of fats and proteins. As a result, we now know that the proper treatment of diabetes demands a quantitative adjustment between the dietetic needs of the patient, in terms of his total caloric requirements, and his ability to utilize varying amounts of carbohydrates, fats, and proteins.

The principles established by Allen are fundamental, they are on an experimental basis, are quantitatively exact, and must form a part of any proper method of treating diabetes. However, except for the improvement of function resulting from physiological rest, the method of dietetic management, irrespective of its accuracy, can do comparatively little to build up a tolerance for foods, and is especially lacking in a means of making it possible for severe cases to take enough food to maintain their nitrogen equilibrium.<sup>22</sup> This deficiency has been supplied by insulin.

After arriving at a correct diagnosis of the disease, the first step in the treatment, provided complications do not exist, consists in determining the total amount of food that is necessary to maintain the patient in nitrogen equilibrium or to enable him to hold his body weight at the optimum for his height and age. McCann<sup>23</sup> has suggested the addition of 10% to the basal metabolism as a means of determining the total number of calories required. A simple means, and accurate enough for practical purposes, consists in finding the patient's optimum weight for height and age, reducing this to kilograms, and multiplying by 30, the figure

obtained representing the total number of calories required for 24 hours. The weights for height and age may be found in tables compiled by life insurance companies or in such books as Joslin's Diabetic manual<sup>24</sup> The optimum weight may be approximated by multiplying the height in inches over 5 feet by 5 1-2 and adding 110.

Knowing the total amount of food required, it is of the greatest importance that this be properly partitioned between carbohydrates, proteins and fats. The studies of Woodatt<sup>25</sup> and Shaffer have served to point out the dangers incident to an inordinate amount of fat in its relation to the carbohydrates and proteins, and have furnished comparatively simple formulae, based on the ketogenic and antikeogenic potentialities of these foods, by which their proper quantitative relationship can be established for the given individual. An excellent review of this phase of the subject is given by Evans<sup>26</sup>. Briefly, the practical working of these principles is as follows, the amount of protein necessary to maintain nitrogen equilibrium is between 2-3 and 1 gram per kilogram of body weight, this figure being arrived at by determining the optimum weight as outlined above. Knowing the total number of calories and the number of grams of protein required, it is possible, by means of the formulae, to calculate the grams of carbohydrate and fat that the patient should receive. The formula for the carbohydrates is:

$$\text{Carbohydrates} = \frac{\text{Total Calories} - 8.9 \text{ Protein}}{22}$$

That for estimating the fats is:

$$\text{Fats} = \frac{\text{Total Calories}}{10} - \frac{\text{Protein}}{2}$$

or knowing the carbohydrate and protein, they may be determined by Woodatt's formula,  $\text{Fat} = 2 \text{ Carbohydrate} + 0.55 \text{ Protein}$ . These formulae take into consideration the ketogenic and antiketogenic properties of the different foods,

it being known that 0.46% of the protein and 0.9% of the fat may be converted into acid bodies, while 0.58% of the protein, 0.1% of the fat, and all of the carbohydrate may be converted into glucose, and permit of oxidation of the ketone bodies.

The so-called ketogenic-antiketogenic =  $0.46 \text{ Protein} + 0.9 \text{ Fat}$

$0.58 \text{ Protein} + 0.1 \text{ Fat} + \text{Carbohydrate}$

should not exceed 2, and is better slightly below this figure. When the diet of a given case has been decided upon, it should be checked by this formula so as to guard against its possible production of acidosis. Hannon and McCann<sup>27</sup> have presented charts by means of which these dietetic principles can be readily applied, but the formulae given above seem simple enough.

The following case will serve to illustrate the practical application of the above method of dietetic adjustment. Miss L. W., 20 years of age was referred to me on September 25, 1923, by Dr. S. W. Page, of Greenwood. The patient stated that she had always been more or less fond of sweets, but had enjoyed excellent general health. In May of this year she developed an increased appetite, and began to pass an increased amount of urine, getting up several times at night for this purpose. Shortly after this she developed an ischio-rectal abscess which was opened. At this time Dr. Page discovered sugar in the urine. She had been denied all sweets, directed to eat very little bread, and Dr. Page stated that her diet consisted chiefly of proteins and green vegetables. The urine had continued to show sugar. The general examination of the patient was negative, there being no signs of tuberculous infection, which had been suspected because of the ischio-rectal abscess, and essential features of her treatment are shown in the accompanying chart.

Case of Miss L. W.		Fasting		
Date	Diet	Insulin	Urine	Blood Sugar.
9-25-23	Unknown	0	Positive sugar	
9-26-23	200 grams 5% veg.	0	" "	252 milligrams
9-27	200 grams 5% veg.	0	28.5 grams.	per 100 cc.
9-28	55 grams protein.			
	140 " fat.		21.25 grams	
	45 grams carbohydrate	0		
9-29	Same	5 units	19.69 "	
9-30	"	5 "	14. 0 "	
10- 1	"	15 "	18. 2 "	
10- 2	"	20 "	15. 7 "	
10- 3	"	25 "	No reduction.	
10- 4	"	7.5 "	" "	
10- 5	"	7.5 "	" "	
10- 6	"	5.0 "	" "	
10- 7	"	2.5 "	" "	
10- 8	"	0.0 "	Trace of sugar.	
10- 9	"	7.5 "	No reduction.	
10-10	60 grams protein.			
	150 grams fat.			
	50 grams carbohydrate.	5.0	3.5 grams	
10-11	Same	10.0	No reduction.	
10-12	"	10.0	Trace of sugar.	
10-13	60 grams protein.			
	140 grams fat.			
	45 grams carbohydrate.	10.0	No reduction	140 milligrams.

This case shows the inestimable value of insulin. A young woman with moderately severe diabetes, whose urine contained a large amount of sugar even on a diet of 200 grams of 5% vegetables and 50 grams of protein, was enabled to take her maintenance diet by the administration of 5 units twice a day. One point in connection with this case is worthy of note. It will be observed that, with the patient on her maintenance diet, it was necessary to increase the insulin daily through October 3, when 25 units were given. Immediately following this, it was possible to reduce it sharply, until, with slight fluctuations, it was found that 10 units enabled her to remain free of

sugar in the urine. Since having insulin in my possession, I have studied 13 diabetics. Five of them were rendered sugar free and put on their required caloric intake without the aid of insulin, one of them had a most severe complicating pyogenic infection and no means that we employed seemed to have any effect upon the amount of sugar in the urine or the blood, while all of the remaining 7 exhibited the phenomenon above note, i. e., after they had been made sugar free by the use of insulin, their tolerance seemed to increase, and their need for insulin decreased. Including the case of Miss L. W., I have had only two cases in whom it was necessary to continue the

administration of insulin after their period of study in the hospital.

Insulin is not always efficacious. McCann<sup>28</sup> has reported at least two cases in which the extract seemed to have practically no effect, care being taken to insure the potency of the preparation used. This has led to speculation on his part as to the possibility of diabetes resulting from disease elsewhere than in the pancreas. Strouse and Schultz<sup>29</sup> have reported one case in which insulin was found to be effective until the onset of an infection, after which sugar and acetone reappeared in the urine, and the blood sugar rose in spite of relatively large doses of the extract. On September 15 I saw Mrs. B. S. in consultation with Dr. T. M. DuBose, of Columbia. The following is a brief summary of her case:

The patient was a white woman, about 40 years of age. No complete history was obtained, but she stated that in a general way she had enjoyed good health until about 6 weeks before when she began to suffer with boils in different parts of the body. These had gradually extended, until, at the time that we saw her, they had developed into huge abscesses on the neck, under the arms, on the back, and on the calves of the legs. She had been found, for the first time, to

have sugar in the urine about 1 week before.

The physical examination showed a rather obese woman, very toxic, and aroused with difficulty. There was a distinctly sweetish odor to the breath. There were immense abscesses in the deep tissues of the neck, in the axillae, and on the calf of the left leg. There were innumerable small boils over the back and the abdomen. There was a low grade of qral sepsis. The heart and lungs were negative as far as the examination went, but no effort was made to carefully examine the backs. The blood pressure was 122, systolic; and 80, diastolic. The pulse, 110; temperature, 96 to 100.

Urine: strongly acid; S. G. 1022; trace of albumin; strongly positive for sugar; a few pus cells, and many hyaline and granular casts.

Blood: Haemoglobin, 70%. White blood cells, 16,400.

Blood Sugar: 306 milligrams per 100 cc. of blood.

Dr. Doughty promoted drainage as freely as possible from the infected areas, and the combination of dieting and insulin was vigorously carried out. It will be seen from the accompanying chart that practically no influence on the sugar elimination resulted.

Case of Mrs. B. S.				
Date	Diet	Insulin	Urine	Blood Sugar.
9-15-23	Juice 1 orange 2 eggs.	60 units	1.1% sugar	303 mgms, per 100 cc.
9-16-23	Same	40 "	1.1%	
9-17-23	"	40 "	28 grams.	
9-18-23	300 grams oatmeal 100 grams butter 6 eggs	60 "	10.5 grams	
9-19-23	Same	60 "	24 grams	
9-20-23	500 grams 5% veg.	70 "	12.5 grams	
9-21-23	Same	70 "	11.9 grams	
9-22-23	"	70 "	26.6	
9-23-23	Patient could not take food.	60 "	36.6 grams	
9-24-23	No food	40 "	Patient died at 1 P. M.	



The explanation of these failures is not at all clear. We have all observed that in the presence of infection the diabetics' tolerances are lowered, and the probabilities are that, in cases as severe as this one, there is complete failure of the metabolic mechanism concerned in the glycogenic function and the oxidation of glucose. These failures of insulin to act indicate another direction for investigation.

The above methods represent the safe and sane management of diabetes today. By the use of them the maximum diet that the patient is capable of utilizing can be determined, a tolerance short of the maintenance diet can be supplemented, and acidosis can be prevented or controlled except under unusual conditions. It is too much to say that the various carbohydrate "cures", oatmeal, rice, potato, and others, are forever to be discarded, and that they do not aid in stimulating or altering for the better, the metabolic functions of the diabetic, or that caramel, laevulose, glycerol, and other substances are not more available than the usual foods, but it is safe to say that such procedures as these are of unproven utility, and that, in the vast majority of cases, they are unnecessary. The possibility of stimulating pancreatic function by means of the roentgen ray falls into the same category. Petersen<sup>30</sup> has reported that irradiation over the pancreatic area in proper dosage first decreases sugar tolerance, and then increases it. He states that improper dosage invariably decreases tolerance. The ultimate answer to these questions must be left to future investigations.

There is one phase of the treatment of the diabetic that is too often neglected, and that is the education of the patient. It is very common to hear physicians say that they have no trouble in managing these patients as long as they have them in a hospital, but that as soon as they are dismissed the valuable work which has been done for them is nullified by a failure to carry out in-

structions. Of course, there will always be patients of whom this is true. However, we physicians must not be too quick to put the blame entirely on the patients—Difficulties of this kind may be rendered much less frequent by a conscientious, systematic effort to educate the patient during the course of treatment in the hospital. In dealing with unintelligent and uneducated people, the difficulties are, at times practically insuperable. But, even here, a simplification of instructions, demanding a great deal more patience, care, and time on the part of the physician will produce surprisingly good results. In the treatment of the intelligent and educated cases, I have been very much gratified at the success of the proper approach to them.

As soon as a patient enters the hospital I attempt to have them provided with two books, Joslin's *Diabetic Manual* and Locke's *Food Values*<sup>31</sup>. I ask them to use the time of their hospital stay in familiarizing themselves with the very valuable information contained in Joslin's book and in learning the ready use of Locke's tables. I let them understand that their whole future welfare depends upon making themselves authorities on their disease, that they must learn to live with it, and cannot hope to live in spite of it. Ten to fifteen minutes with each patient a day, devoted to quizzing, lecturing, and answering questions, will almost always result in arousing a great deal of interest in the subject, and will not infrequently produce the desired result of having the patient adopt his disease as a hobby. When this has been accomplished, and the patient taught the simple methods of urinalysis, the physician may look upon his work with a satisfaction that is rarely afforded in other diseases.

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#### Conclusions:

1. The subject of diabetes has been reduced to one approaching mathematical exactness. Close application and study are shown to be necessary for physicians to ap-

ply the principles of treatment that have been established.

2. A general review of the accepted methods of treatment is presented.

3. A case of severe diabetes, complicated by extensive pyogenic infection, that failed to respond to insulin is reported.

4. Emphasis is laid upon the importance of enlisting the patient's interest in his disease, and in encouraging him to become an expert in the dietetic management of it.

#### *Bibliography:*

1. Garrison: History of Medicine, Philadelphia, 1913.
2. Allen: Boston Med. and Surg. Jour., February, 1915.
3. Joslin: Oxford Medicine, LV, 140.
4. Osler: Practice of Medicine, New York, 1912.
5. Joslin: Oxford Medicine, IV, 141.
6. Mortality Statistics, Washington, 1918.
7. Mortality Statistics, Washington, 1922.
8. Bureau of Vital Statistics, Columbia, 1922.
9. Joslin: Oxford Medicine, IV, 137.
10. Garrison: History of Medicine, Philadelphia, 1913.
11. Garrison: History of Medicine, Philadelphia, 1913.
12. Von Mering & Minkowski: Zentralb. f. inn. Med., 1889, XXIII, 393.
13. Opie: Disease of the Pancreas, Philadelphia, 1903.
14. Allen: Jour. Exper. Med., 1920, XXXI, 363.
15. Allen: Am. Jour. Med. Sci., 1917, CLIII, 343.
16. Allen: Jour. Exper. Med., 1920, XXXI, 381.
17. McLeod: Am. Jour. Med. Sci., 1923, CLXXV, 451. (abs)
18. Epstein: Am. Jour. Med. Sci., 1917, CLIV, 103.
19. Hamman: Can. Med. Assn. Jour., Nov., 1919.
20. Rigler & Ulrich: Arch. Int. Med., 1923, XXXII, 343.
21. Hamman & Hirschman: Arch. Int. Med., 1917, XX, 761.
22. Mosenthal & Clausen: Arch. Int. Med., 1918, XXI, 269.
23. McCann, et al.: Arch. Int. Med., 1923, XXXII, 226.
24. Joslin: Diabetic Manual, Philadelphia, 1919.
25. Woodyatt: Tr. Assn. Am. Phys., 1921, XXXVI, 269.
26. Evans: Am. Jour. Med. Sci., 1923, CLXVI, 106.
27. Hannon & McCann: Bull. Johns Hopkins Hosp., 1922, XXXIII, 128.
28. McCann, et al.: Bull. Johns Hopkins Hosp., 1923, XXXIV, 205.
29. Strouse & Schultz: Jour. Am. Med. Assn., 1923, LXXX, 1592.
30. Petersen: Am. Jour. Med. Sci., 1922, CLXIII, 391.
31. Locke: Food Values, New York, 1920.

## SOCIETY REPORTS

### CHESTER.

#### ELECTION OF OFFICERS FOR THE COUNTY MEDICAL SOCIETY FOR 1924.

President, Dr. J. B. McKeown, Great Falls, S. C.; Vice President, Dr. J. P. Yong, Chester, S. C.; Secretary-Treasurer, Dr. W. J. Henry, Chester, S. C.; Delegates to State Convention, Dr. W. R. Wallace, Chester, S. C.

Alternate: Dr. H. M. Ross, Chester, S. C.; Dr. Geo. A. Hennies, Chester, S. C.

Alternate: Dr. A. M. Wylie, Chester, S. C.

Censor: Dr. W. M. Love, Chester, S. C.

Program Committee for the year: Dr. H. M. Ross, Dr. A. M. Wylie, Dr. R. H. McFadden, Chester, S. C.

### OCONEE

The Oconee County Medical Society met in the Town Hall at Walhalla, 4 p. m., Jan. 2, 1924.

Dr. B. F. Sloan, President, occupied the chair and on roll call the following members were present: Drs. W. C. Marett, J. W. Wicliffe, W. Bell, J. D. Verner, B. F. Sloan and E. A. Hines.

The minutes of previous meeting were read and approved. This being for the election of officers and delegates the following were duly elected:

Dr. W. C. Mayes of Fair Play, President; Dr. J. D. Verner of Walhalla, Vice President; Dr. E. A. Hines of Seneca, Secretary-Treasurer.

Dr. B. F. Sloan was elected delegate to the State Medical Association at Orange-

burg and Dr. J. S. Stribling, alternate.

Dr. W. C. Marett was elected censor for three years, the one year term of Dr. W. C. Mayes having expired.

A full discussion was had of the Chiropractic Bill now before the Legislature and a committee appointed to interview the representatives and Senator from Oconee County.

The Scientific Program was then taken up and the Cabot Case Records were used as a basis of discussion to the edification of every member present.

There being no further business, the Society adjourned to meet at Westminster at the call of the President.

E. A. Hines, Secretary.

### ANDERSON

The last meeting of the Anderson County Medical Society for the fiscal year 1923, was held in the Chamber of Commerce Rooms, Wednesday, December 12, at 12 o'clock noon.

The meeting was called to order by the President Dr. Watson.

Minutes of the previous meeting were read and adopted. The Secretary rendered a hurried report of society finances. Dr. Dean on programme presented a most interesting case history of "Scaudleins Disease." Discussions followed.

This being the occasion for election of officers for the coming year nominations were entertained. The following officers were duly elected.

President, Dr. G. S. Clinkscales; Vice-President, Dr. J. O. Sanders; Secretary-Treasurer, Dr. Lee W. Milford.

Lee W. Milford, M. D.,  
Secretary-Treasurer.



## RESOLUTIONS

WHEREAS, the regular medical profession has always stood for the best interests of the public whom we serve, and

WHEREAS, the public looks to the regular medical profession for guidance in matters pertaining to their lives and health, and

WHEREAS, we believe that chiropractic in without scientific basis and a menace to the public health, and

WHEREAS, we believe that the passage of the so-called Model Chiropractic Bill, which no doubt will be introduced at the next session of the General Assembly of South Carolina, will turn loose upon the public numbers of improperly trained persons, now therefore

Be It Resolved, by the Marlboro County Medical Society in regular meeting assembled on December 6th., 1923, that we go on record as opposed to the passage of the so-called Model Chiropractic Bill, and that a copy of these resolutions be sent to the Senator and Representatives from Marlboro County, the Committee on Legislation of the South Carolina Medical Association, the President of the South Carolina Medical Association, and to the Journal of the South Carolina Medical Association.

Signed—Marlboro County Medical Society.

D. D. Strauss, M. D.,

Douglas Jennings, Jr., M. D.,  
Committee.



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## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### INTRA-ABDOMINAL ADHESIONS

Deaver—Surgery, Gynecology, and Obstetrics, October, 1923.

The author believes that intra-abdominal adhesions are acquired and not congenital. He states that Jacksons membrane, Lanes kink and the like, result from a previous inflammation, either pre-or post-natal.

He states that adhesions may be constructive as well as destructive. As an example of the former he points to the well known "walling off" process which is so frequently seen in acute infections, whereby nature prevents generalized peritonitis. Such adhesions are frequently temporary as they disappear with the exciting lesion. Another example of the constructive tendency is seen in the agglutinating and wound healing process in anastomotic operations. This occurs through the medium of a fine layer or deposit of fibrin.

Pathologic bacteria constitute a responsible factor in adhesion production.

As long as the endothelial covering of the peritoneum remains intact there is no danger of adhesions, but should this be destroyed by mechanical, chemical, or bacterial agents, the subendothelial vessels at once open a direct route from the adjacent tissues to

the blood stream proper, and adhesions are quick to form.

The most frequent site for adhesion formation is in the right upper abdomen. Here, the symptomatology is so frequently simulated by visceroptosis and neurosis that at times only the X-Ray will decide the diagnosis.

Many of these adhesion cases present the symptoms of stasis and incomplete obstruction rather than those of an inflammatory lesion.

To prevent post operative adhesion formation he suggests cautious hemostasis, wise use of absorbable ligatures, gentle manipulation of the intra-abdominal organs, the constant use of warm moist tapes, and the prolonged avoidance of peritoneal and intestinal exposure to the air.

In addition he gets his patients out of bed as quickly as he considers it safe. This, of course, is to be decided by the degree of pathology present at time of operation. Early locomotion has a tendency to break up loose adhesion formation.

Suitable exercise, after leaving the hospital such as golfing, swimming, and gymnastics also break up slight adhesions and possibly prevent the formation of others.

## ANESTHESIA

*By W. B. Ward, M. D., Rock Hill, S. C.*

I am afraid we neglect the choice of anesthetic more than we should. There is too much of a tendency to have a routine anesthetic with little regard for fine distinction between the several good ones.

I feel that we should decide as carefully the anesthetic as the operative technique.

We should have a good reason for our

own choice and have backbone enough to use it. Not allow the patients to choose for themselves. It cheapens our profession to say that a patient can take local or general as they choose.

We believe in causing a patient as little pain as possible consistent with safety but do not allow them their choice of anesthetic.

## INTERNAL MEDICINE

*By N. Barnell Heyward, M. D., Columbia, S. C.*

The attention of the profession of the state is called to one of our most recent therapeutic agencies, viz, deep therapy or the treatment of deep seated disease processes by means of the high voltage X-Ray. In comparatively recent times the technical difficulties incident to the giving of the high voltage doses of X-Ray have been overcome and the results (temporary perhaps have been most astounding and gratifying. Your hopelessly inoperable cancers of the breast, of the stomach, of the uterus and elsewhere need no longer be put upon sufficient doses of morphine to dull the pain and worry until death relieves the doctor and the patient. Now these patients may be referred to some office or institution which has been equipped with the deep therapy outfit with the confidence that they will be benefitted far beyond your fondest hopes and in most cases that all symptoms will be completely or greatly relieved. Judging by what the writer has himself observed, it offers this class of patient a considerable prolongation of life and in undreamed of comfort. Perhaps it offers them relief for an indefinite period. And in conjunction with surgery it certainly offers the operable patient the very best hope of a cure.

In the treatment of many non-malignant disease processes deep therapy has proved to be our most valuable therapeutic agent. And new discoveries in the field are being made every day!!! Truly, the outlook is most encouraging.

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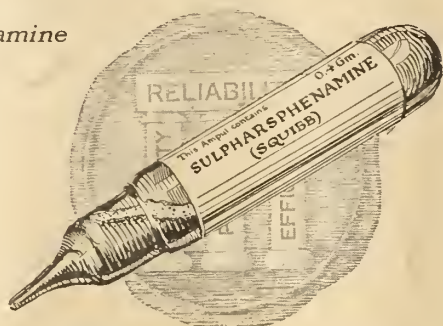
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# The Journal OF THE South Carolina Medical Association

VOL. XX.

GREENVILLE, S. C., FEBRUARY, 1924

NO. 2

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## OF THE

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## EDITORIAL

---

### THE CHIROPRACTIC BILL DEFEATED IN THE SENATE

The Medical Profession of South Carolina is gratified that the Senate killed the Chiropractic Bill. Let us hope that it will not be an issue again. Senator Mason of Oconee, the county in which the Journal is published has been true to the best interest of the South Carolina Medical Association and the public. Dr. D. M. Crosson Senator from Lexington County led the fight against the bill in a most effective way. Many other Senators deserve the gratitude of the profession in this matter. Senator Mason's letter follows:

Columbia, S. C. February 15, 1924.

Dr. E. A. Hines,

Seneca, South Carolina.

Dear Doctor:

Your short letter of appreciation of my efforts on the chiropractic bill received. You physicians owe me nothing for my efforts in defeating this measure. I only did my duty as I saw it. I have the highest regard for the medical profession, but at the same time am opposed to any quack who might undertake to come in and take advantage of the medical profession.

As you know, I have always supported the State Board of Health, which I believe is the first thing to consider in our well-being. Also I have stood by every appropriation that has been offered for the Medical College, realiz-

ing that the very best friends and the last friend that will stand by us in our last moments is our home doctor.

With kindest personal regards and best wishes, I remain, as ever,

Your friend,

W. P. Mason.

---

### DISTINGUISHED GUESTS TO ATTEND THE ORANGEBURG MEETING

---

Dr. William A. Pusey of Chicago eminent Dermatologist and President elect of the American Medical Association will be one of our guests. Dr. Pusey was born in Kentucky and therefore a Southern man of whom the entire Southern profession is proud. Dr. J. C. Bloodgood the distinguished surgeon of Johns Hopkins will deliver the address in surgery. Dr. W. H. Higgins well known Internist of St. Elizabeth's Hospital Richmond, Virginia will contribute a paper on his research work in Thyroid Diseases.

---

### ORANGEBURG SOCIETY APPOINTS COMMITTEES FOR STATE MEDICAL MEETING

---

The following information has been given to the public press:

Plans are being made for the annual convention of the State Medical Association, which gathers in Orangeburg on April 15 for a session which will last through the 17th. The local doctors are planning to take good care of their confreres and everything will be done to give a good time. Owing to the lack of hotel facilities, the doctors and their wives, who have an auxiliary association will be entertained in the homes of the people of this city. The following committees have been appointed:

Entertainment: Drs. C. A. Mobley, chairman; G. H. Walter, H. T. Schiffley, T. M. Stuckey, L. H. Thomas, R. I. Coney, J. F. Wannamaker, J. W. Parker, O. D. Dodenhoff.

Finance: Drs. G. M. Truluch, chairman; J. L. B. Gilmore, Ed Wannamaker, W. C. Meyers, J. S. Wimberly, E. L. Horger, J. T. Green, C. I. Green, A. W. Connor.

Publicity: Drs. T. A. Jeffords, chairman; W. R. Lowman, G. C. Bolin, M. L. Nelson, C. I. Goodwin, W. M. Carn, P. L. Felder, C. H. Able, Paul Connor.

Reception: Drs. H. P. Moore, chairman; V. W. Brabham, L. C. Shecut, D. J. Hydrick, A. L. Black, H. W. Koopman, B. G. Barentine, W. L. Heaner, J. H. Johnson, P. N. Phillips, W. L. Mack, T. A. Jones, H. N. Wells, Dr. Sherman.

---

### ORANGEBURG PROGRAM. TITLES OF VOLUNTEER PAPERS

---

No general call for volunteer papers for the Orangeburg meeting has been sent out to each member of the Association as has been the case in the past owing to the fact that the House of Delegates last year changed the plan of making up the scientific program.

The new plan calls for a symposium on each day of the session and the remaining time to be given over to the reading of volunteer papers. Necessarily the scope of volunteer papers will be very much curtailed.

The two Symposia selected by the Scientific Committee this year are as follows: Diabetes for the first day and Obstetrics and Gynecology for the second day, six or seven papers by invited speakers for each symposium.

Quite a number of volunteer titles have already been received by the Scientific Committee so that up to the time of going to press the committee has in hand about thirty papers nearly enough in fact to take up all of the time of the Association this year. Any member of the Association who wishes to read a paper should send the title to the Secretary of the State Association and the Scientific Committee will determine its place upon the program and also determine the limit to the number of papers to be read.

(Continued on page 57)

## ORIGINAL ARTICLES

### REMARKS ON GRANULOMA INGUINALE

*By Geo. E. Thompson, M. D., Inman, S. C.*

In presenting a paper under the above title, I wish to disclaim the attempt to write anything new or original on the subject. My purpose is to discuss briefly a disease which I believe is occasionally seen in this section, and submit a few details of a case for your consideration.

To McLeod of India is given the credit for recognizing and describing Granuloma Inguinale as a separate and distinct disease. He called it Serpiginous Ulcer of the Genitals.

Formerly supposed to exist only in the tropics, and sub-tropics, Poch reported the first case in print in the United States in 1906, and only in recent years has the disease been recognized to any extent in this country.

While there have been many contributions to the literature, there have also been many opinions ventured as to what the disease is, and what causes it, and there seems to be some question still as to whether it is of Bacterial or Protozoal origin, with the preponderance of opinion perhaps favoring Donovan's Bodies as the etiological factor.

The disease is found in the colored race almost exclusively, and oftener in the female than the male. Usually beginning in the form of a papule on or near the genitals, papules multiply, may break down, ulcerate, and unless checked gradually involve a more extensive area, spreading being along the margins, and on opposing surfaces.

While not always presenting a uniform

appearance, they are usually elevated lesions, and have a regular margin, however, their general appearance is no doubt influenced to a large extent by the previous applications of drugs in some instances, and this fact should be borne in mind. In contradistinction to the lesions of Syphilis, the condition is not painful, neither is there glandular involvement nor inflammation of the surrounding tissues in uncomplicated cases.

The disease takes on more the character of a new growth than that of tissue destruction.

It is not strange that the disease has in the past been classed as a form of Syphilis, Tuberculosis or Cancer, since it may possess some features in common, or may complicate one of these.

(1) Preliminary Report on Treatment Granuloma Inguinale with Exhibit of cases, W. A. Reed, M. D. and Samuel Wolf, M. D., New Orleans Med. & Surg. Journal July 1921.

(2) Bookman reports several cases having a positive Wassermann in one of which there were two kinds of lesions, the syphilitic which healed under specific treatment, and the granulomatous ulceration which cleared up only after the use of Tartar Emetic.

(3) Lynch divides the disease into two types, and thinks that the majority of cases are associated with Syphilis, thus leaving the simple type in the minority.

Formerly the disease was treated by excision, cauterization, and X-rays, but results are said to have not been very satisfactory.

(4) Tartar Emetic is now the drug of choice, being considered a specific, however Gage (5) thinks some cases are best treated by excision in addition to the Tartar Emetic. Lynch (3) advocates the



treatment of associated Syphilitic cases with both Tartar Emetic and Arsphenamine.

The Tartar Emetic may be administered in any of the usual ways, but is best administered intra venously in not stronger than 1% solutions, as stronger solutions are said to produce pain. Too large doses in beginning also give pain. DeLoup says that: "the old and conservative begin with doses of 4 to 5cc., while the young and ambitious begin with doses of 10 to 12 cc."

Should even a small amount of the solution be allowed to escape into the cellular tissue, it gives the patient a great deal of pain, and this accident should if possible be avoided. Ointments of the drug are said to be irritant in stronger than 1% solution.

I now call to mind 2 patients of years gone by whose maladies paralleled some of the symptoms just described. The first a male of about 25 from whom I removed what I at first supposed to be a large chancroid, the other a female of about 35 with an extensive ulceration around the vulva which nothing seemed to help. I treated these cases with K. I. and Mercury over a long period without benefitting them in the least.

The third and last case, the one in which I was able to make a diagnosis at least clinically and therapeutically this year I shall speak of at more length.

Mary B., col., female, unmarried—no children. Born in N. C., never been out of the Carolinas, family and past history have no bearing on present trouble.

Date of onset present trouble not fixed, probably about 4 months ago. Started with small growth on right labia majora, which has spread to the other side. Says she has been under treatment for Syphilis for past 3 months, with condition growing worse.

At time of examination she had a papilomatous eruption on both labiae, extending into groin on right side. There appeared

to be no glandular involvement, complained of no pain, but had a discharge from the vagina with a very offensive odor, and her blood yielded a Positive Wassermann report.

She was put on mixed treatment for 3 weeks, during which time she was given 2 intravenous injections of Neo-arsphenamine, but she returned at the end of 3 weeks more with no apparent improvement. It was then that I thought of the possibility of Granuloma Inguinale, and began the use of Tartar Emetic. This was given intravenously, beginning with 5cc., the dose was given at 2 to 4 day intervals until 11 doses were administered being gradually increased to 12cc. All other treatment was discontinued. There was improvement after the 4th dose, and the lesions appeared to be cured at the 12th dose which was administered 1 week after the 11th.

I had hoped to exhibit some good photographs of this case, but the protographer tells me it was impossible to produce a good picture from a negative that was not in focus. I show you what I have. Drs. Reed and Wolf of New Orleans were kind enough to loan me some photographs of a few of their cases and I had copies made from them. I think some of them have been published. They illustrate the condition very well indeed.

Summary: Granuloma Inguinale is an infectious ulcerative condition manifesting a selection for the negro race, usually involving the genital areas, and is probably endemic to a limited extent in this section.

The disease is progressive in character and pursues a chronic course.

The differential diagnosis is to be made most frequently from Syphilis, Chancroid, Tuberculosis, and Cancer.

Tartar Emetic has a specific effect in controlling the disease, and in some instances may prove a valuable aid in making a therapeutic diagnosis.

(2) Jour. AM. A. Sept. 2, 1922. (3) Jour. Sou. Med. Asso., Sept. 1922. (4) First used in Gran. by Aragoa & Vianna 1913. (5) Arc. Derm. & Syph., Mch. 1923.

## EDUCATING THE PUBLIC TO DEFEAT TUBERCULOSIS, A PROBLEM FOR THE MEDICAL PROFESSION

*E. Paul Knotts, B. S., M. D., County Health Officer, Newberry, S. C.*

The earliest medical records contain descriptions of the disease tuberculosis. Since the time of Hippocrates medical men and philosophers have dealt in some manner with the "Great White Plague". Notwithstanding the fact that we know so much about tuberculosis, knowing the causative agent, methods of transmission, conditions favorable for its implantation, yet science has failed to evolve any specific or even satisfactory method of treatment and it continues down to us through the ages still meriting the epithet applied to it as the "Captain of the men of death". So much has been written and said about tuberculosis that it is difficult to discuss it from an unapproachable angle. Students of medical history have viewed the gradual decline of mortality rates from this disease with a certain amount of satisfaction alloyed only by chagrin that the decline has been so small. Since treatment is satisfactory only in the early stages and even then to a limited class, the necessary steps for further campaigns to eliminate tuberculosis must concern itself with prevention.

Every informed physician will admit that tuberculosis is practically a universal infection. Yet, there is a vast difference between the infection and the development of a clinical case. To use the parable of the sower, so descriptively employed by Osler, "Some seeds fell by the wayside and the fowls of the air came and devoured them up." These are the bacilli scattered broadcast outside the body, the majority of which die. "Some fell upon stony places." These represent the bacilli that find lodgment in us but never constitute an infection.

"Some fell among thorns and the thorns sprang up and choked them". This represents those cases who have an infection latent or otherwise but whose protective forces get the better of the struggle. "But others fell on good ground and sprang up and bare fruit an hundredfold". Of this fourth group were the 1500 who died from this disease in South Carolina in 1922. No less than 90 per cent of adults fall into the third class as outlined here and in 10 per cent no thorns spring up to rescue the victim and they are destroyed by tuberculosis. The real work to be prosecuted against tuberculosis then must center around preventing the ground from being a favorable one for the invasion of the tuberculosis bacillus. The reasons why the tuberculosis bacilli may find good ground and result in clinical tuberculosis may easily be grouped under three heads: First: The Habitus Phthisicus spoken of by the ancient observer Hippocrates in description of those unfortunate individuals who have an inherited or at least congenital poor resistance to an infection and particularly to a tuberculous infection. Second: Misuse of the body functions, which will include, inordinate exposure to inclement weather and insanitary surroundings; insufficient rest and improper or insufficient food. Third: Weakened resistance to tuberculosis infection due to acute and chronic diseases other than tuberculosis, most of which are preventable to some degree.

With these facts before us the problem concerning tuberculosis should seem much simplified and now follows the part that the physician must take if tuberculosis is to be fought effectively. The horror of having tuberculosis must be turned to a good purpose. As it is today the fear of tuberculosis is exaggerated, confused, distorted and is unproductive of purposeful plans leading to defeating the disease. The physician feels that he can make a diagnosis of tuberculosis only with hesitancy for fear of offending or frightening the patient or his family. Once confronted with the posi-

tive diagnosis there is a hysterical and fearful patient. Stretching before him there is an uncertain period of life that is filled with anguish of knowing that he is marked with a brand more indelible than Cain's curse, to be shunned even as the leper in days of long ago. The family of the afflicted one shudder at the thought of having one of their members afflicted with such a disgraceful disease. It is to be spoken of only in subdued whispers and the secret kept as if it were of state importance. The patient is regarded with the greatest pity not unmixed with disgust. The patient, fearful that others may discover his affliction, inadvertently will throw all caution to the winds and rather than spit in a cup, go to a sanitarium, build a sleeping porch at home or do any of the things usually done by a trained tuberculous person, they will do the opposite. Recently this was brought out very forcibly at a clinic for tuberculous suspects held at my office in Newberry. A young girl having a positive diagnosis made was advised by her physician to seek sanitarium treatment. Under great emotional stress she replied: "You wish to send me to the pest house. I won't go. I could never come back and face my friends again. They would never associate with me again." And the worst of it is that her point is not badly made. The enlightened brethren of this generation have inherited and magnified their inheritance of considering tuberculosis as a plague until it is a most difficult if not impossible task to engender a healthy public opinion to accept such an infection in a matter of fact manner with commonsense treatment and precaution. Part and parcel of this erroneous thought is the lack of proper education of the laymen by the medical men. By exploiting the fear of the Public of smallpox, vaccination against that disease has over-ridden every objection and we see the disease vanishing. At this time we have no such simple and spectacular weapon to use against tuberculosis. It will take a re-organization of

daily habits, occupations and diets but this is entirely possible.

The superstitious horror which so far has performed no rational good towards eliminating tuberculosis has gone hand in hand with an utter apathy of the very factors which transforms an infection into a clinical case. While no effort must be spared to minimize exposure, yet we can not entirely escape exposure and some degree of infection. The problems for the further reduction of tuberculosis must reside in the defense of the individual. This defense must be begun in health. The problem of nutrition must be more adequately considered by the family physician. Based on examination at schools of some 20,000 children of South Carolina the startling fact is presented that not less than 30 per cent are under-nourished. What a fertile field for the tuberculosis bacillus. Children must be brought up under better physical conditions than our fathers and mothers. More attention must be paid to what may seem the insignificant factors of the child's health. Deciduous teeth must receive the early and frequent dental attention they merit. Enlarged and diseased tonsils and adenoids must be removed early. Regularity of habits of eating, playing and sleeping must be instituted. Institutional children grow to sturdy maturity under conditions that are otherwise not ideal because their life is like the world with a poor resistance to tuberculosis must be sought out and once discovered treated as carefully as if already infected.

Sanitation must be employed in its larger significance in that preventing any disease, a step has been taken to prevent tuberculosis. For example typhoid fever, a scourge in itself, can so easily be prevented by sanitation and vaccination, yet one third of those who recover from typhoid fever to die inside of two years die of tuberculosis. Here in South Carolina where the winters are mild and the summers temperate, there is a climate that is well adapted to the treatment of tuberculosis, and we see health



resorts from the coast to the mountains, yet we find a tremendous high mortality among our native stock. Hookworm, malaria and other preventable infections and malnutrition are playing their part to undermine our natural protection.

When the Public have been taught by medical men that every one has at some time a tuberculosis focus of infection and that the development of tuberculosis is dependent upon some factor or factors aside from the entrance of the tuberculosis bacilli and then if the same frenzied antipathy, now ordinarily manifested in the presence of a case, is turned in an intelligent, logical fashion then and not until then will the disease discontinue its ravages as the "Captain of the men of death".

Conclusions: 1. Every adult and most children may be considered as harboring a tuberculosis infection.

2. The reasons for development of clinical tuberculosis from such an infection are well known and within the power of each individual to control.

3. While exposure must continue to be minimized, the fear of tuberculosis must concern itself more with beating it than avoiding it and this concern must be manifested from early childhood to the end of life.

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#### THE PRESENT STATUS OF GASTRO-ENTEROSTOMY. WITH CASE REPORTS

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*By Carl B. Epps, M. D., Sumter, S. C.*

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At first glance, and, even upon further consideration, a gastro-enterostomy appears to be a violent attack upon Mother Nature. It seems surprising that even this very patient old lady does not more often resent this drastic interference with her routine housekeeping. To thus make a new opening in the stomach and intestine where none is intended to be, is a bold procedure. It

was easy to sympathize with the veteran surgeon, Bodine, of New York, when we heard him say that he had never been able to become fully reconciled to this short circuiting of so much of the gastro-intestinal tract. The fact, however, that this is still a very common operation in the leading surgical centers, is proof positive of its great value.

Let us first consider the short-comings of gastro-enterostomy, especially in the treatment of ulcers. As the usual form of gastro-enterostomy is gastrojejunostomy, we will use the terms interchangeably. Some years ago post-operative vomiting, the so-called "vicious circle", was a very common sequel of gastrojejunostomy. This has been largely eliminated by doing the posterior, short-loop, operation; by properly locating the opening; and by making the anastomosis from right to left instead of the reverse.

Another troublesome post-operative complication is the formation of new gastric ulcers, or jejunal, or gastro-jejunal ulcers. The chief cause of these new ulcers is doubtless the same as that of the original ulcer, namely, the action of the acid gastric secretion, as there is usually present with ulcers a condition of hyperacidity, or hypersecretion. If, for any reason, the acid chyme is not neutralized by the bile and pancreatic secretions, it may continue to cause ulcers elsewhere. As the normal contents of the jejunum is alkaline, we are especially apt to get a jejunal ulcer when the acid contents of the stomach is poured directly into the jejunum, through the new opening, without first being neutralized by passing through the duodenum. Babcock, of Philadelphia, has stopped performing gastro-enterostomies, and, instead, he performs an anastomosis between the gall-bladder and the ulcer bearing area of the stomach. By this means he claims to get into the stomach a life-time supply of the alkaline, ulcer-preventing, and ulcer-curing, bile. Horsley says that the best results follow gastro-enterostomies performed for

complete pyloric stenosis, where the alkalinity of the duodenal contents cannot be lowered by the passage of acid gastric contents through the pylorus. Therefore, the unreduced alkalinity of the duodenal contents can better protect the jejunal mucosa at the gastro-enterostomy opening than if this alkalinity had been reduced by the passage of the gastric juice through the pylorus. This does not appear to be a well founded claim, however, for the alkalinity of the duodenal contents would be just as much reduced by the acid stomach contents when they come together at the gastro-jejunosotomy opening as it would be if the mixing took place in the duodenum. In fact, it would seem that the acid gastric secretion would do the jejunum more harm to be discharged directly into it than to first be partially neutralized by passage through the duodenum.

Another supposed cause of secondary ulcers is trauma, such as may be brought about by the incorrect use of clamps. It has been proven, though, that ulcers occur where no clamps have been employed.

The use of non-absorbable sutures has been blamed for these ulcers, for the sutures have often been found in the new ulcers. William Mayo and Sir Moynihan are among those who advise against the use of any but absorbable sutures. Dr. A. J. Ochsner, who uses silk in all his gastro-enterostomies, claims that it is not a cause of ulcers. As proof he cites the fact that he has no greater percentage of post-operative ulcers than do the surgeons employing absorbable sutures entirely.

Infection of the suture line is mentioned as a cause of these ulcers. The use of such appliances as the Murphy button in making the anastomosis has also been blamed. As the ulcers often occur at a distance from the suture line, none of these latter factors will always explain their presence.

Abuse of diet following gastrojejunosotomy is probably an important cause of post-operative ulcers. A suitable diet, and the administration of alkalis for some time af-

ter operation, will possibly prevent many such ulcers. It is variously stated that these ulcers occur after from 1 to 4 per cent of all gastrojejunosotomies. They are much more apt to follow the anterior than the posterior operation.

Placing the opening too near the cardiac end of the stomach may cause insufficient drainage of the pyloric end. Also making the opening too small may cause incomplete emptying of the stomach.

Failure to firmly fix the edges of the mesocolon to the gastrojejunosotomy stoma may be followed by hernia of the jejunum through the opening, and possibly intestinal obstruction.

Gastro-enterostomy has been found to be a more satisfactory treatment for duodenal ulcers than for gastric ulcers. Rodman, of Philadelphia, says that, while for duodenal ulcers it is a curative measure, for the gastric ulcer it is now, and will always be, only a palliative procedure, unless the ulcer is removed at operation. Judd states that while gastrojejunosotomy, for gastric or duodenal ulcer, offers the patient a good prospect of complete and permanent relief of all symptoms, still, because of the frequency of malignancy of the stomach, and because a greater proportion of gastric ulcers are cured if the ulcers are excised in addition to gastrojejunosotomy, he believes that excision should always be practiced. In duodenal ulcers he considers that either gastrojejunosotomy, or excision, is sufficient. In cases of duodenal ulcer, William Mayo favors pyloroplastic operations, such as that of Finney, in many cases. Where the ulcers are large, or when they return after removal, a partial gastrectomy may be indicated.

One of the most puzzling questions that confronts us is, "When is surgery justifiable in the treatment of gastric or duodenal ulcer?" William Mayo, in one of his most recent articles upon ulcers of the stomach and duodenum, says, "Only the chronic intractable cases, or the acute cases giving rise to hemorrhage, or localized peritonitis,

with signs of perforation, are considered for operation." He calls attention to the fact, though, that the majority of people with chronic ulcer have neither the time nor the money for prolonged medical treatment. Bastedo, of New York, considers these cases surgical, which, after competent medical treatment, continue to show: (1) Persistent or recurrent hemorrhage, even small in amount; (2) pain; (3) nausea; (4) pylorospasm of such persistence as to simulate pyloric stenosis; (5) inability to ingest comfortably the ordinary wholesome foods permitted by the circumstances of the patient, thus making the poor patient a surgical case earlier than the well-to-do patient; (6) inability to ingest comfortably enough food to maintain nutrition while living a normally occupied life; and, (7) recurrence after apparently a cure. Bennett, of London, mentions, among others, the following cases as calling for surgical treatment: (1) All cases with a history extending over many years; (2) all cases with large ulcers adherent to surrounding structures; (3) practically all cases in which a test meal is retained in the stomach for more than 6 hours; and, (4) all cases whose economic position makes prolonged medical treatment impossible. John B. Deaver, in a plea for surgical treatment, says, "the longer an ulcer remains unhealed, the less amenable is it likely to be to surgical, or any other treatment, and, finally, there remains the formidable danger of perforation in about 7 per cent of cases, of carcinoma in a large percentage of gastric ulcers, as well as hemorrhage and hematemesis from the unhealed ulcer". He states it as his persistent belief that the treatment of chronic peptic ulcer is, with but few exceptions, essentially surgical. Whenever possible, he excises the ulcer with knife or cautery. He believes that, from the standpoint of rationality and cure, a gastro-enterostomy should be done, in addition to excision, in all cases that present marked hyperacidity before operation.

What percentage of cures may we expect

from gastro-enterostomy? William Mayo states that gastro-enterostomy will cure more than 90 per cent of duodenal ulcers. He says that this operation, combined with excision, will cure 90 per cent of the smaller gastric ulcers along the lesser curvature, where about 75 per cent of stomach ulcers occur. Deaver reports 90 per cent cured by gastro-enterostomy, or by this operation combined with such procedures as excision and pyloroplasty. At the 1922 meeting of the American Surgical Association, comprehensive reports concerning the end-results following surgical treatment of ulcers of the stomach and duodenum were made by leading hospitals of Boston, New York, and Philadelphia. These statistics revealed surgical cures in about 95 per cent of duodenal ulcers, and more than 90 per cent of gastric ulcers. In a review of 210 of gastric and duodenal ulcers treated by simple posterior gastrojejunostomy, Metraux, a Swiss surgeon, reports cures in 90 per cent. He claims that this operation will give better results than other operations on the stomach, in the hands of the majority of surgeons, for a long time yet.

When we come to consider cancers of the stomach and intestines, gastroenterostomy may be a valuable curative aid, combined with early, radical excision of the growth and surrounding glands. Or, in later cases, it may be used as a valuable palliative measure.

Considering from every view-point the present status of gastro-enterostomy, we are convinced that it is anything but an obsolete operation. Being a comparatively safe and easy operation, it still occupies a strong position as one of the most valuable procedures available to the modern gastrointestinal surgeon.

#### CASE REPORTS:

Case 1: A negro man, age about 30. Had symptoms of chronic indigestion for months. Recently began to vomit everything eaten; often cannot retain even water. So weak that he cannot walk without assistance. Severe pain in region of stomach.



At operation found hard mass about one and one-half inches in diameter, located at pylorus, and practically closing pyloric opening. Some adhesions about it, but not much glandular involvement. Did posterior gastrojejunostomy. Patient made rapid recovery, had no more vomiting at all, and was doing nicely, had an excellent appetite, and general condition good when last heard from. This patient was especially interesting because he gave a 4 plus Wassermann. That brings up the question as to whether or not the ulcer was specific. Simple ulcers have been found in syphilitic patients, or, at least, one such case has been reported by Fowler, of Rochester, New York. Ewald claims that 10 per cent of all gastric ulcers are syphilitic. Others, such as Eusterman, do not consider syphilis an important factor in these ulcers. On the other hand, Castex and Mathis hold the extreme view that inherited or acquired syphilis is the exclusive cause of gastric and duodenal ulcers. The case here reported received syphilitic treatment after operation.

Case 2: White woman, age about 50. Had been troubled with indigestion for several years. Recently, eating caused pain quite often; pain of a sharp, griping nature coming on soon after eating. Patient gave history of a fall, during girlhood, striking a severe blow over region of liver, and she thought perhaps her present trouble was due to that blow. Test meal showed that stomach did not empty very well. Operation revealed hardened area of pylorus, extending about one and one-half inches. No involvement of glands noted. Found peculiar, ear-like tumor on fundus of gall-bladder, about one-third inch long. Balance of gall-bladder apparently healthy. Appendix almost normal. Removed the gall-bladder and appendix, and did a posterior gastrojejunostomy. This patient was of an extremely nervous type. I had done a goiter operation upon her several years before,

and her nervous symptoms had been much relieved until the pains began to be severe in the abdomen. This patient made an uneventful recovery. She enjoyed eating and was very much pleased with her condition. Something over a year after operation she began to have some more uncomfortable feelings about the stomach, but she ascribed that to indiscretions in eating. The pathological examinations of the gall-bladder revealed nothing malignant, simply fatty tissue and scar tissues. The presence of scar tissue suggests that possibly the tumor was due to the blow received about 35 years before.

Case 3: Negro woman, age about 51. Has had indigestion about 5 months. In about 3 hours after eating she has pains in stomach and the pain continues until she vomits. She is much weakened, and has lost a good deal of weight. The pains did not begin until about one month ago. Barium test meal is practically all retained in stomach 70 hours after taking. Five days afterwards some of the Barium was removed by lavage, although she had had about 6 previous lavages since taking the Barium. At operation found very hard mass about two and one-half inches long at the juncture of the stomach and duodenum, and passing around the anterior and posterior surfaces like a horseshoe. The mass was more in the duodenum than in the stomach. Some adhesions, and one or two glands enlarged. Did posterior gastrojejunostomy. She made a rapid recovery, and went home feeling well and digesting her food nicely. She gave a history of having had a severe form of dysentery every Spring, something like pellagra. After leaving the hospital, this dysentery returned, and she died a little over one month after operation. At autopsy the anastomosis was found in perfect condition, fully patulous and healthy. The opening at the pylorus was only about the size of a large lead pencil. The inner appearance was that of an old healed ulcer.

## NEW BANDAGE METHOD IN TREATMENT OF FRACTURED CLAVICLE, WHICH OBVIATES OPEN REDUCTION IN CER- TAIN CASES

By *A. M. Bidwell, Captain Medical Corps,  
United States Army.*

1. There are both open and closed methods of treating fracture of clavicle. Open methods are indicated in cases of: (a) Great displacement which cannot be held reduced: (b) Comminuted fracture where sharp fragments threaten pressure upon vessels and nerves: (c) And where closed methods fail.

Closed methods are of the following accepted types (a) Recumbent treatment in bed. It is hard to enforce—and unnecessary to be bed ridden, when ambulatory methods give equally as good—and even better results. (b) “Modified Sayre Dressing” first strap of adhesive plaster; loop end on arm, tail end in horizontal position on chest; second strap, with hole to receive point of elbow, carried up to, or over well shoulder, with forearm flexed: (c) “Sayre Velpeau” using first strap of “Sayre” and bandage of “Velpeau” (d) “Velpeau Bandage” (e) “T” board splint on back; tail down spine, top across shoulder, is probably only indicated in fracture bilateral and even then not always the dressing of choice. The “Modified Sayre” or “Sayre Velpeau” are very satisfactory, and usually prove most successful.

2. In fracture of clavicle, distal fragment is carried downward-forward-and inward. The mechanical principle in all closed methods, is to get the shoulder upward, backward, and outward. The fragments are then drawn into alignment, and immobilized in that position. In my experiences, although the majority of cases suitable for closed methods, have done exceptionally well in a “Modified Sayre” or

“Sayre Velpeau” dressing, there have occurred a few cases, which for various reasons, did not lend themselves to either of these methods. Naturally open reduction would seem indicated.

3. It occurred to me that in cases, when there was no other indication for open methods, other than inability to maintain fragments in proper alignment by any of the accepted closed methods, some other form of bandaging might suffice. With this idea in mind there has been devised by me, a bandage for fractured clavicle. Two cases are cited in which this bandage was used; one was a woman, white, 23 years old, single, first seen by me four days after the injury; the other was a man, white, 26 years old, single, first seen by me four weeks after the injury. In both cases, the usual closed methods had failed. Wassermann reaction and Urinalysis were negative in both cases. In each case my bandage was applied. In each there was obtained good alignment, immobilization, and union, with a very good end result. Altho three weeks is accepted as ample time for union, it was thought advisable to maintain the dressing one week longer, due to the apparent difficulty of these cases.

4. In “Bidwell’s bandage for fractured clavicle” the following procedure is practiced: (a) Cleanse opposing skin surface with alcohol, dust with powder, apply compress, cloth or cotton at axilla, elbow and chest. (b) Shoulder, well side, depressed as low as possible, injured side, elevated upward as far as possible, rotated outward and pulled backward. (c) Point of elbow, injured side, placed just back of mid-axillary line. (d) Forearm flexed to 135 degrees and in mid position, resting on chest. (e) Finger tips reaching to sterno-clavicular articulation on well side. (f) Digital examination at site of fracture is made to be assured of complete reduction and good alignment, and if not, make such change in upward, outward, or backward position of shoulder, injured side to obtain same. (g) Bandages, gauze not desired on account of

stretching, muslin satisfactory, but cotton flannel is preferred. Number required, 6, each, in length five yards, width three inches. Place cotton pad over extensor surface of elbow, surgeon standing in front and little toward injured side of patient. First bandage is started at spine, between scapula, carried up over well shoulder, across anterior surface of chest, and across forearm, down to and under posterior surface of elbow, injured side, and up across back to top of shoulder, well side, each turn being drawn snugly. Second and third bandages being applied as first, in such a manner as to form at the posterior surface of elbow, injured side, a loop sling, extending over proximal two-thirds forearm and distal one-fourth of arm. Two or three turns of the bandage, in coming across anterior surface of chest, should be passed under forearm, so as to give some support. It is to be noted, that the lateral direction of each turn at the elbow, is from before backward, thus facilitating outward rotation and backward pull. Fourth bandage is started at spine, between scapula, carried toward well side around chest in horizontal direction, across forearm and arm, to back at commencing point, each turn being drawn snugly. Fifth and sixth bandages applied as fourth, in such a manner as to extend below at tip of elbow, and above at level of wrist and deltoid impression of humerus. To insure the retention of arm at midaxial line, two or three of the turns of fifth bandage, after passing over the arm, is brought in anterior direction along inner side of elbow, up over forearm, and then backward across forearm and arm, to back again, on these few turns encircling a figure "8" large loop around chest, small loop around elbow.

5. Safety pins are now inserted close to each other in a line extending from shoulder, well side, to elbow, injured side, both anterior and posterior surface of chest. This pinning is important to avoid slipping of the dressing. It is well to run a line of

safety pins along posterior surface of forearm and arm for same reason.

6. Conclusion: In a certain number of cases where usual closed methods have failed, open method is obviated by using my bandage method.

## TROPICAL DISEASES IN RELATION TO THE SOUTH

*By F. B. Johnson, M. D., Professor of Clinical Pathology, Medical College State of S. C., Charleston, S. C.*

When we speak of tropical diseases, the first question comes to mind is, what may be classified as such? We can not include those diseases that are only prevalent in the tropics, which would be a very narrow field, but must include in our definition the diseases most prevalent in tropical climates; to which may be added those in sub-tropical climates also.

For instance malaria is a widespread disease occurring over a wide range of latitude, but because of its greater prevalence in tropical climates it is rightly considered as a tropical disease.

A point to remember is, that a variation in altitude and winds affect temperature to a great extent, so that there are many places much nearer to the equator than we are, yet having a much cooler climate than ours. However, in temperature climates, the shorter duration of the hot season makes the disease more easily controlled.

In addition to the many bacterial diseases that are found in temperate climates there are others mostly protozoal in nature requiring a certain developmental stage outside of the human host and are either insect or animal borne or both before again infecting the human being. All of these insects or animals are not necessarily found within the torrid zone, and therefore afford constant danger of carrying certain diseases during the warm months in sub-tropical or



temperate climates. Many of these diseases besides malaria, considered as tropical, are being found to exist fairly widespread, not only here in the South, but throughout the United States.

When we realize that it is only a few months out of the year that the anopheles mosquito breeds in this part of the country, and that man is the usual mode, and not the mosquito, by which infection is carried over for the rest of the year, the problem of eradication is much simplified. If all of our malaria, particularly including the latent cases could be diagnosed and treated by quinine and screening over sufficient time to eliminate carriers, in spite of the mosquito, malaria could be abolished (Bass and Rockfellow's report.)

This is one point that the doctor fairly well recognizes, but the public is not yet fully educated to this fact, and the physician in the patient's home can do the most to bring this about.

With the disappearance of malaria, black water fever will also disappear as has been repeatedly demonstrated.

Yellow fever has only to be referred to as showing this. Understanding the method of transmission, and the prevention of the mosquito biting, it has almost been wiped off the earth, and now with the latest weapon of attack, prophylactic inoculation, it now is being eliminated in its last strongholds. (Nog & Rock. Rpt.) We who live in Charleston now; can, with few exceptions, hardly realize the fear of, or picture to ourselves the thirty or more epidemics of yellow fever that have swept this city in years gone by.

During the late war, probably due to a certain extent that a great many men of the army were trained in the South, but more likely and to a greater degree, to contact over seas with other men from everywhere, it has been shown by Kofoed and Sweezy that more than one fifth of our army, when discharged, were carriers of *Entamoeba histolytica*. In single examinations of returning troops about 12.8% were

found infected and 4% of those remaining in this country. However, a repeated examination and careful search of a small number of men an infection, of 67% was found. These of course are not cases of amoebic dysentery, but of carriers with no symptoms. Probably it will be found that only a limited number of these, if kept in good condition will develop symptoms of the infection, but remember it is from those having the encysted forms of amoeba that the disease is spread and not the active cases of amoebic dysentery that show the motile vegetative forms. This fact should keep us more on the look out for determining whether our cases of colitis are due to amoeba or not. One must remember also that dysentery is not an essential factor of amoebic infection. There may be only transient diarrhoea, and sometimes no symptoms whatsoever except the development of liver abscess or perforation; about 40% of the cases developing one or the other of these complications.

In Italy a great many of the cases of colitis in children have been shown to be due to amoebic infection, so it would be advisable for us not to eliminate amoeba as cause without careful examination.

It is surprising to me how few cases of amoebic dysentery are found here by laboratory examination. It is very seldom that we are asked to search for amoeba and only a few cases are seen each year. Amoebic liver abscess is only rarely found here. It is well to remember that besides the finding of the amoebaemetin is said to offer a good diagnostic aid in the active form of infection, but does not in the detection of the quiescent form in carriers.

That intestinal infection, with symptoms, occurs with other protozoa as *Trichomonas*, *Giardia*, and *Balantidium* there appears to be very little room for doubt, and we should constantly bear them in mind.

Sprue with its associated diarrhoea with pultacious, putty colored, frothy, voluminous stools and associated raw tongue symptoms, has been repeatedly reported in

the Southern States particularly by Graham, in Savannah, Harris, in Atlanta, Wood in Wilmington, Simon in New Orleans, and Boyd in Galveston. Undoubtedly this disease has often been confused with pellagra, pernicious anemia, and chronic pancreatitis. I do not know of a single case being reported in South Carolina, but I have had my suspicions of some of the cases diagnosed as pellagra here as being cases of spru, when the diagnosis was based on intestinal and tongue symptoms, without typical skin manifestations. The mental symptoms of both diseases may coincide very closely.

While a form of Monilia (*M. psilosis*) has been declared as the causative factor by Ashford and others, the latest opinion of Ashford, who has done a great deal in investigating this disease which is quite prevalent in Porto Rico, is that a certain food deficiency associated with monilia psilosis plays the important role. The combination of a certain food deficiency associated with some specific organism may some day be also found to produce pellagra.

Schistosomiasis, existing fairly widespread throughout tropical climates, involves the abdominal viscera and in the nearby islands of the West Indies, it involves more particularly the rectum with dysenteric symptoms. During the late war many Porto Ricans and natives of other islands were brought to this country as laborers. In Charleston there were several thousand employed at the U. S. Embarkation depot, and we would naturally expect that many of their local diseases were brought along with them, most of these men were returned to the places they came from, but it would not be at all surprising if some of their infections were left behind.

In the Southeast I know of only one case reported and that was by Freeman at Jacksonville. Infections have been reported I believe from Southern California. I would like to call your attention to a case of Schistosomiasis recently reported, occurring in New York in which during a pelvic opera-

tion, the appendix showed unsuspected schistosome involvement. This case had lived in Africa ten (10) years before with no other suspected source of infection since then. Those coming in contact with the Japanese may possibly develop lung symptoms of Paragonomous infection; three such cases being reported from S. America.

Relapsing fever has been epidemic in the United States, but it has been many years since any cases have been seen here though the disease is fairly widespread throughout Central America. This disease is apt to be confused with malaria, and has many symptoms in common with influenza, dengue and in the bilious forms with infectious jaundice and yellow fever.

Of the Trypanosome infections, Brazilian trypanosomiasis interest us most. While both the Brazilian and African types, which differ widely in symptoms, appear to occupy rather limited territory, yet there is a continued spread of the American form, so also the Brazilian form, in which the armadilla has been shown to be a reservoir of infection, may be found on further investigation to occupy a wider field.

In leishmaniasis there are two well recognized forms, splenic or kalaazar and cutaneous. Three cases of kalaazar have been reported in this country, the cutaneous type being much more frequently found. During the past year alone as many as seven cases have been reported. There is no record of any cases originating in this country, but Darling strongly suspects that it may be found in the southern part of the United States.

In America a form of cutaneous leishmaniasis, or espundia has been found occurring chiefly in South and Central America. Starting as one or more pruriginous papular lesions on the uncovered surface of the body, later becoming pustular and followed after several months by other sores which assume a granomatous ulceration involving frequently the nose and buccal cavity.

Framboesia or yaws has some factors strikingly in common with syphilis. There

is a primary sore, a secondary stage with a general eruption of a papular pustular character showing a fungoid raspberry character and finally tertiary lesions with involvement and destruction of bone and cartilage of the naso-pharyngeal region which is usually called gangosa or muffle voice. There is found a spirochete morphologically identical with the treponema a pallida, and a positive Wassermann reaction. Several imported cases have been reported in this country and more often since the ending of the late war. I saw one case here which I thought was yaws, but the consultants decided that it was syphilis. Verruga eruption is said also to somewhat resemble that of yaws.

The condition spoken of as Madura foot or mycetoma has been reported several times in this country. From the literature I have noted thirty three cases of which only nine, or possibly ten, could be said to have originated in this country. The majority of the cases occurred in Mexicans. The usual appearance of the foot is typical with its enlargement and multiple sinuses from which exudes a viscid fluid containing yellowish-white or black granules.

Blastomycotic infections with skin and visceral involvement have been reported in this country. Mycotic infection of the lung and also bronchial spirochetosis have not infrequently been diagnosed as pulmonary tuberculosis.

Having found such a widespread infection of *Filaria bancrofti* in Charleston it is very hard to reconcile myself to the statement of Francis that it was not found by him originating anywhere else in the South. Shattuck has recently reported a case in which micro-filaria were found, that is considered to have originated in Massachusetts. I have the record of a negro, examined in Charleston, who claims to have come from New Orleans, and that filaria larva were found in his blood where he was treated twenty years before. He continued to show them on my examination.

In conclusion, beg to emphasize that throughout the South we should ever bear in mind these diseases mentioned, and those others such as plague, leprosy, Malta fever, typhus, and dengue usually considered as tropical, I can do no more than call your attention as an example to the diseases pellagra and granuloma inguinale considered one time tropical and now shown to have existed, unrecognized, though found to have been widely distributed in temperate climates for many years.

### INTUBATION IN LARYNGEAL DIPHTHERIA AND ANTITOXIN

*By L. O. Mauldin, M. D., F. A. C. S.,  
Greenville, S. C.*

Mr. President and Fellow Members of the South Carolina Medical Association:

Having had considerable dealing during the past few years with some severe cases of diphtheria of the laryngeal type, it becomes my pleasure at this time to give you the benefit of my experience with the cases. I do not mean to elaborate at length on individual cases, but to present some of the salient facts as they have occurred to me in the summing up of my experiences with these cases.

The first fact I wish to present is that any case of laryngeal diphtheria should be considered as a severe and serious case from the time the doctor suspects it.

Another fact is that you cannot always find the membrane in the larynx and that you may have to make a diagnosis on clinical symptoms alone.

Another fact is that it cannot always be differentiated in small children from enlarged thymus gland.

Another fact is that if it is a case referable to the larynx alone we should endeavor to get a culture, but we should not wait for the culture before instituting whatever treatment seems eminently necessary.



Another fact is that if there is no membrane to be seen in the throat, foreign body should be excluded before diagnosis is absolute.

Another fact is that if the breathing is distressing and even the membrane is not seen in the throat, and culture is negative foreign body is negative, the patient should have an immensely large dose of antitoxin and if the breathing has been distressing as long as a few hours, the patient, if a child, should be intubated.

This brings us to the question of intubation versus tracheotomy.

The fact I wish to present about these two operations is that they are both life saving operations and as a life saving measure either one or the other should be done, and right here is where the golden rule should come in. Ask the question if it be your child under the same conditions which would you rather have done. My answer is that intubation is preferable and if it fails resort to tracheotomy. Intubation well done does little trauma and leaves no scar.

Either is usually done in cases of diphtheria in private homes and the opportunity for sterilization is very bad some times. Frequently it has to be done at night in the country with bad lamp light and one has to feel his way, for it is practically impossible to see what is being done. In such circumstances intubation is eminently preferable. Intubation is less conducive to pneumonia than is tracheotomy.

Another fact I wish to mention is that intubation can be more easily done with the patient in recumbent position and with less danger, for the heart, already weak, can take care of itself better with the patient in the recumbent position.

Another fact is that in intubating a full sized tube should be used for the child's age and it is better to use such a one as is made of the non-coughable pattern.

Another fact is that extubation should not be done for at least five days. The idea is to let the antitoxin have time to completely dissolve the membrane and the swelling in

the larynx have time to subside. In one of the cases I had I removed the tube in three days and the child turned awfully cyanotic and was in a fair way to die. With considerable difficulty, however, I was able to get the tube back in place and with a little artificial respiration the patient came around all right. After leaving the tube in the larynx three days longer I removed it and the child breathed all right.

Another fact is that intubation alone will not cure diphtheria, but it is essential that in any case of laryngeal diphtheria, or, in fact, diphtheria of any kind we should give a very large initial dose of antitoxin. In fact, it has been my experience that one immense dose of antitoxin without any more dosing is much better than one average dose followed by repeated doses.

I have purposely made this paper short and I do not expect it to tell all there is to be told about intubation, but it gives, at least, some of the salient facts summed about some cases of laryngeal diphtheria I have treated or been associated in treatment with other physicians in my community.

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## MULTIPLE SENSITIZATION IN ASTHMA AND HAY FEVER

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*By Hal. M. Davison, A. B., Phar. B., M. D.,  
Atlanta, Georgia.*

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The fundamentals of immunology are not yet completely established. Many principles involved are not understood, and many more, supposedly understood, are probably misinterpreted. The primary principles in the diagnosis and treatment of asthma and hay fever are now generally accepted.

All immunological work is based upon the principle of specific action individual proteins. A protein introduced into the living organism causes the production of a specific antibody. This antibody may react in a certain degree to allied proteins, but it reacts to no other protein in just such a

manner as it does to the one that caused its production. All diagnosis and treatment of immunological diseases depends upon this fact. No one has yet been able to treat these diseases successfully in a non-specific way.

The origin of hypersensitiveness in humans is undetermined.

(1) Cooke and Van der Veer have concluded that hypersensitiveness is inherited according to the Mendelian law, and that it is a dominant characteristic. It is evident that no specific sensitization or specific antibody is transmitted from parent to offspring because we often find instances in which the one may suffer from asthma due to a food or animal emanation, and the other from hay fever caused by a pollen.

When sensitization begins, and why a person becomes sensitive to any certain substance or substances, and not to others, is unknown. Apparently only the tendency to become sensitized is transmitted. Symptoms of sensitization may appear in individuals of any age—in babies a few weeks old as well as in old people. Some authors think that only those symptoms appearing first before the age of forty are inherited and really immunological. It may be said that the mechanism of becoming sensitive is altogether not understood. It appears probable that every case of hypersensitiveness is sensitive to more than one protein. There are also progressing cases, in which individuals, who are sensitive at first to one or several proteins, later become sensitive to others. This is illustrated by the following case:

J. R. M., male, dentist, age 35, began to suffer with hay fever five years ago. Symptoms appeared about June 10th and ended about July 15th each year for four successive years. In 1922, attacks began as usual, but instead of ending in July, continued with even greater severity till October. In June 1922, the patient came for diagnosis after his attack had begun. At this time he did not react to ragweed. In 1923, positive reactions to corn, timothy,

high ragweed, and low ragweed were obtained.

If we accept the above as a fact, and it seems undoubtedly true, at once reasons for some of our failures in the treatment of asthma and hay fever become evident. When symptoms of the disease reappear in cases that had been treated with apparent success, we are justified in supposing that sensitization to other proteins may have developed. We may also suppose that, in some cases which gave strongly positive reactions to our first tests, we have rested upon a partial success, when we should have continued the examination until the patient had been thoroughly tested. Practically every investigator has been impressed with the frequency of multiple sensitization.

(1) In 1916, Cooke and Van der Veer reported multiple sensitization in 42.3 per cent of five hundred and fifty-one cases of hypersensitiveness in humans. (2) Van der Veer in another communication says, "As at least forty per cent of asthmatics show a multiple sensitization, the attacks may be due to one substance at one time and to another at a different time." (3) Sanford mentions cases sensitive to both animal or fowl emanations and to foods. (4) Hutcherson reported a case sensitive to horse emanations, to tobacco, and to egg. (5) Brown, of Washington, reports his own case of asthma. He was found sensitive to emanations from dog, cat, and horse. (6) Walker, in one paper, says: "Those patients who show multiple sensitiveness, that is, who give positive skin tests with many different types of proteins, are the most trouble to treat; in such cases, treatment is a matter of judgement." In another article, (7) he suggests treating such patients with the protein that gives the strongest reaction, or with the one that the patient comes in contact with most often. From these references, we may readily conclude that multiple sensitization must always be taken into consideration in the diagnosis and treatment of immunological diseases.

Heretofore, it has been accepted that

many multiple reactions were group reactions and were caused by proteins composed chemically of the same basic formulae. The treatment of hay fever in the past has been based upon this idea. If a patient gave positive skin tests to the pollens of many grasses, he was still treated with only one, this one, as a rule, being timothy. All cases of fall hay fever were treated with the pollen of short ragweed, regardless of other sensitization. Such a principle is probably erroneous, and must have caused many failures in our past experience. (8) Bern-ton, in a review of the treatment of hay fever, suggests as probable causes of our failures, the insufficient number of solutions used, the insufficient strength of those solutions, and the use of pollens gathered before ripening. (9) Longcope has expressed the opinion that multiple reactions are not group reactions, but are, "specific each within itself."

If the theory of group reactions were a fact, every person sensitive to the pollen of any grass should react in some measure to the pollens of all grasses. This is not true, however, and every case sensitive to the pollens of grasses gives a different grouping of reactions, being usually also sensitive to some pollens other than those of the grasses. Cases of fall hay fever may react to the pollen of high ragweed, or to other pollens, stronger than to the pollen of low ragweed. In many cases of asthma, sensitization to several different substances is found, and this most often includes substances from both the food group and the inhalant group. Short reports of certain cases that illustrate the types of sensitization just mentioned are given below. (Insert report of cases here.)

It will be noticed that in cases Nos. 1, 2, and 3, low ragweed gives the strongest reaction. In case No. 4, low ragweed comes fifth while high ragweed ranks second. In case No. 6, both ragweeds give very mild reactions, in comparison with the other pollens. In case No. 7, Cocklebur ranks first, with high ragweed second, while low

ragweed is fifth. Case No. 10, reacted to high ragweed but not at all to low ragweed.

In the cases (Nos. 6, 8, 9, and 10) that have hay fever during the grass season, two do not react at all to timothy and in the other two, timothy ranks second in one (No. 8) and fifth in the other (No. 9). It will be noticed that the grouping of reactions from the grasses differs in each case,—in No. 6, the strongest reactions being given by corn and Bermuda grass, in No. 8, by orchard grass and timothy and, in No. 9, by corn and red top.

In the selecting of pollens for the treatment of any case of hay fever, it seems practical to take into consideration, first, the seasonal occurrence of the disease, second, the comparative strength of the skin reactions, and third, the distribution and prevalence of the pollens,—this last, of course, directly determining the contact between the patient and the pollens. In accordance with these principles, only one of the above cases should be treated with timothy. One case requires treatment with high ragweed and not at all with low ragweed, and four cases require treatment with both. We cannot yet report a sufficient number of cases to establish a principle, but the percentage of successes in the treatment of this disease has been greatly increased in our own instance by following the above principle.

Only two cases of asthma have been mentioned. Case No. 5, a boy age six years, had been tested by several investigators, who always stopped when sensitization to both egg and milk was found. His asthma continued. He was retested with the entire inhalant group and with all the foods eaten and was found sensitive to horse emanations and to seven other foods besides egg and milk. He has remained free of asthma since the complete removal of these articles from his diet and hyposensitization with extract from horse dander. Case No. 10, was referred to us as a case of hay fever. Tests were made with thirty-six different pollens and a very slight reaction to high ragweed only was obtained. The tests were contin-



ued and a very severe reaction to orris root was obtained. This consisted of a wheel 40 millimeters in diameter with pseudopod-like projections. Mule dander, spring wheat, and rice gave strongly positive but less marked reactions, than orris. The patient had also been suffering for many years, supposedly, from a gastric ulcer, and epigastric distress and pain had been almost constant. Further tests gave positive reactions to the above mentioned foods. Removal of these from the diet stopped the pain at once and it has not returned. This case is still being studied and will be reported fully later. It is mentioned here only as a good example of multiple sensitization with different manifestations.

Summary: 1. Multiple sensitization

must be suspected in every case of asthma and hay fever and every case should be thoroughly tested.

2. Additional sensitization may develop in immunological cases from time to time.

3. Failure in the treatment of asthma and hay fever may be due to lack of proper or complete diagnosis, failure to sufficiently hyposensitize by the treatment used, or to additional sensitization, developing after diagnosis had been made.

4. The treatment of hay fever according to the principle of group reactions is not successful and is fundamentally wrong.

5. Ten cases of asthma and hay fever illustrating multiple sensitization are presented.

Cases of Hay Fever and Asthma Illustrating Multiple Sensitization.

Case	Chief Complaint	Duration	Season	Positive Reactions
1.—E. B. C. Female Age-35	Hay Fever Asthma	15 years	Aug. 20 to Oct.	Low Ragweed +++++ Cocklebur +++++ High Ragweed ++++ Daisy ++ Yarrow ++ Red Top ++ Rose + Orchard Grass + Sunflower +
2.—S. B. H. Female Age-46	Hay Fever	17 years	Aug. 15 to Oct.	Low Ragweed +++++ Yarrow ++++ Cocklebur +++ High Ragweed ++ Daisy ++ Yellow Dock + Corn + Goldenrod + Sunflower +
3.—R. H. L. Female Age-34	Hay Fever	2 years	Aug. 15 to Oct.	Low Ragweed +++++ Cocklebur ++++ High Ragweed ++ Yarrow + Chenopods +

Case	Chief Complaint	Duration	Season	Positive Reactions
4.—W. B. W. Male Age-64	Hay Fever	38 years	Aug. to Dec.	June Grass +++++ High Ragweed +++++ Plantain +++++ Yarrow +++++ Low Ragweed ++++ Timothy ++ Red Top ++ Cocklebur + Corn +
5.—W. D. H. Male Age-6	Asthma	Since age of 5 months	Entire year—Worse in fall and winter	Horse epithelium +++++ Banana +++++ Tomato ++++ Cheese ++++ Milk ++++ Egg ++++ Carrots ++ Cabbage ++ Turnips ++ Celery ++ Wheat ++ Rye ++
6.—W. T. C. Male Age-40	Hay Fever	10 years	July to Oct.	Corn ++++ Bermuda Grass ++++ Dandelion ++ Golden Rod ++ Cocklebur ++ Yarrow ++ Low Ragweed + High Ragweed +
7.—M. L. Female Age-47	Hay Fever	20 years	Aug. to Oct.	Cocklebur +++++ High Ragweed +++++ Yellow Dock +++++ Rye ++ Low Ragweed + Orchard Grass +
8.—E. A. Female Age-21	Hay Fever	7 years	April to Oct.	Orchard Grass +++++ Timothy ++++ Goldenrod ++++ Sweet Vernal Grass ++++ Rye ++ Red Top ++ Yarrow ++ Daisy + Dandelion + Low Ragweed + Ash +

9.—A. J. Female Age-40	Hay Fever	5 years	All warm weather	Corn ++++ Red Top ++++ Yarrow +++ Orchard Grass +++ Timothy +++ Yellow Dock ++ Plantain ++ Daisy ++ Low Ragweed +
10.—F. H. Female Age-38	Hay Fever Angioneurotic Edema Urticaria Asthma Gastric Ulcer	10 years	June to Oct. for Hay Fever Remainder Spasmodically	Orris ++++ Mule Dander ++++ Spring wheat +++ Rice +++ High Ragweed ++ Fish ++ Turnips ++ Cauliflower ++ Cabbage ++ Celery ++ Onion ++ Nuts ++

## REFERENCES

1. Cooke and Vander Veer, Human Sensitization, Jour. Immunology, Vol. No. 3, June, 1916.
2. Vander Veer, Modern Therapy in Asthma and Hay Fever.
3. Sanford, Protein Sensitization in Asthma and Hay Fever, Minn. Med. Jour. April 1, 1920.
4. Hutcheson, Desensitization in Bronchial asthma, Charlotte Med. Jour., March 1920. Page 99.
5. Brown, Protein Sensitization in Bron-

chial Asthma, Hay Fever and Allied conditions with report of writers own case. Virginia Med. Monthly, July 1922.

6. Walker, A Clinical Study of Four Hundred Patients with Bronchial Asthma, Boston Med. & Surg. Journal.
7. Walker, Oxford Medical.

8. Burnton, Treatment of Seasonal Hay Fever and Some Possible causes of Failure. Jour. A. M. A.—80-18-1301.

9. Longcope, Protein Hypersensitiveness and its Importance in the Etiology of Disease. Jour. A. M. A. Nov. 1921. 77-20-15-35.



## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

### THE USE AND ABUSE OF LOCAL URETHRAL ANESTHETICS

A paper with the above title, by Alexander Randall, appeared in the December 1923 number of the Journal of Urology; it was presented before the American Urological Association at a meeting held last May in Rochester, Minnesota; and is based on replies to questionnaires that were sent out by the American Medical Association for a Committee for the Study of Toxic Effects of Local Anesthetics. The data therein has reference only to local urethral anesthetics.

Randall reports the following drugs in common use: cocaine, novocaine, procaine, apothesine and alypin; and that few of the profession add adrenalin. He states, "Fifty-three men categorically state they will not use cocaine; 18 others admit its use until recently, but have now completely discarded it, a total of 71 convinced of the dangers of cocaine, and pledged against its use. Contrasted to these are found 8 who state they use cocaine exclusively as a urethral anesthetic, to which may be added twenty-seven who ambiguously confess to using it or some of the newer synthetic drugs. In other words, 71 refuse to employ cocaine today thirty-seven admit its use, only 8 of whom use it exclusively.

Eighty-one urologists state their preference to be novocaine, though many take occasion to express their belief that cocaine is the anesthetic par excellence of mucous surfaces and cast doubt on the utility or efficacy of novocaine. Twelve prefer procaine, 7 use alypin and 4 apothesine."

It is, indeed, well to note the marked variations in the strength of solution used by different men, especially in regard to

cocaine solutions. The essayist states, "The replies show that cocaine is used in from 0.25 per cent solution to a 20 per cent solution; from 0.25 grain tablets to pure crystals applied on a swab. Novocaine is advocated in strengths varying from a 0.25 to a 10 per cent solution. Procaine from 0.5 to 4 per cent strength, and alypin in 2 to 4 per cent strength, and apothesine in 1 per cent solution".

Out of 6 deaths reported to be due to the urethral administration of a local anesthetic, 5 are attributed to cocaine and 1 to alypin. In these fatal cases cocaine was used in a strength varying from 0.5 per cent to 4 per cent; alypin 4 per cent solution. Out of a total of 38 cases of severe toxic symptoms following the use of local urethral anesthetics, 25 were due to cocaine, 5 to novocaine, 4 to procaine, 3 to alypin and 1 to apothesine. In Randall's tabulations, the majority of fatalities and toxicities occurred in patients in whose cases the drugs were used for the relief of urethral stricture.

In the discussion of Dr. Randall's, it has emphasized that not only varying strengths of cocaine solutions are used by many, but also that there is an enormous difference in the amount of the solution as used by many—from a few c. c. to as much as 1 ounce as a routine in each case. Therefore, taking into consideration the lack of a standardized technique in the administration of local urethral anesthetics, with many variations in the strength and amount of the solution used; and besides, the absence of autopsy findings to ascertain the actual cause of death, the absence of reports in most cases to know whether or not the urethral tissues had been previously traumatized (this practically contraindicating the use of any local anesthetic) it would appear

unjustifiable to condemn the use of cocaine as local urethral anesthetic as some have done. There is a justification, however, in calling attention to the dangers of these anesthetics, especially cocaine.

Some are even radical enough to state that there is no need for any local anesthetic in any case of urethral work. It may be ventured, however, that if the work were done on them, that they would change their minds. The practical status of opinion in regard to the use of urethral local anesthetics is that there are two camps, namely: those who use cocaine, and those who use some other preparation. There is no difference of opinion that cocaine is the most effective of all the local anesthetics for this work.

Of the twelve urologists who discussed Randall's paper, six were on the side of cocaine. Quoting Victor D. Lespinasse: "I happen to be on the side of cocaine. For a long time I was one of the men who used the cystoscope without any anesthetic at all, but I found that it hurt my patients, so I decided to try to use an anesthetic, and finally selected cocaine. Three-quarters of a grain of cocaine is the smallest amount that has ever produced a fatality. I use 1

per cent solution, 10 c. c. This equals about 1.5 grains. Consequently if every bit of the cocaine I inject gets into the blood stream you are still on relatively safe ground. As it is extremely unlikely that even under the most favorable conditions for absorption, one-half would be absorbed, then you are absolutely safe. This is made up with cocaine crystals and distilled water. It lasts about two weeks. We never use a solution that is contaminated or that is not fresh. It is the French technique—5 c. c., anteriorly, then ten minutes after 5 c. c. more, forcing the first 5 c. c. into the bladder. Then wait ten or fifteen minutes and proceed. We have used this method and have had only one case of anxiety, and that happened to be a man who after I had begun I found had an idiosyncrasy to cocaine. He fainted. That is the only bad effect we had." While it is practically safe to use 10 c. c. of 1 per cent solution of cocaine as advocated by Dr. Lespinasse, there would be no possibility of cocaine poisoning occurring if 5 c. c. are used, this held in the anterior urethra and then after about ten minutes forcing the same 5 c. c. into the bladder with air pressure.

## SOCIETY REPORTS

### DARLINGTON COUNTY MEDICAL SOCIETY

The Darlington County Medical Society met January 29th with Dr. O. A. Alexander, President, in the chair.

After the roll call, eight being present, the minutes were read and approved.

Then the following program was carried out. A discussion of pneumonia by Drs. R. B. Stith, G. B. Edwards, A. B. Hooton and Wm. Egleston. Dr. Wm. Egleston gave an interesting talk on the management of child birth and Dr. Stith reported a case

of an infant who had an open safety pin imbedded in the trachea for a period of 22 months and made an uneventful recovery after its removal.

The following officers were nominated and duly elected for the year 1924.

President, Dr. W. L. Byerly, Hartsville, S. C.; First Vice President, Dr. A. B. Hooton, Darlington, S. C.; Second Vice President, Dr. G. B. Edwards, Darlington, S. C.; Secretary, Dr. Julian T. Coggeshall, Darlington, S. C.; Treasurer, Dr. J. W. Willcox, Darlington, S. C.

Delegates: Dr. T. E. Howle, Hartsville,

S. C.; Dr. W. A. Carrigan, Society Hill, S. C.

Alternate: Dr. R. B. Stith, Lydia, S. C.; Dr. O. A. Alexander, Darlington, S. C.

At the close of our meeting Dr. Wm. Egleston read the following memorial tributes.

Darlington, S. C., Dec. 28, 1923.

The Darlington County Medical Association records with sorrow the passing of one of its oldest and most valued members in the person of Dr. Joseph Frederick Watson, of Lamar, who died on August 20th last.

Dr. Watson was a native of Marion County, South Carolina, was educated in the public schools of that County and at the University of North Carolina and taught in the schools of Marion County. At the age of thirty-nine he entered the Louisville Medical College, from which he graduated. Immediately thereafter he practiced medicine in Mullins and then in Cartersville, South Carolina. Then he settled and practiced his profession for sometime in the Antioch section of Darlington County, from which place he moved to Lamar, where he lived for twenty-eight years. Immediately after his graduation in medicine he married Miss Edna Hare, of Johnson County, North Carolina, who, together with two sons, survives him.

Dr. Watson was a devoted Christian and church member, and to his unflinching work and interest can be attributed the founding and a large part of the success of the Lamar Baptist Church. He was a quiet, dignified, well informed and successful member of the medical profession. He gave much of his time and labor to the reorganization of this association in 1904, and contributed to its proceedings many valuable papers and discussions.

This association goes on record as expressing its value of the services of this faithful member of our profession; its affection and regard for the fine character of this good man and physician, and its sympathy for his people in their sorrow.

A page of the minute book is hereby devoted to his memory and his record, and a copy of these proceedings is ordered sent to his family.

(Signed)

T. E. Howle, M. D.

J. W. Williamson, M. D.

William Egleston, M. D.

Committee.

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Darlington, S. C., January 29, 1924.

The Darlington County Medical Association is called on tonight to mourn the departure of another of its older members in the person of Dr. J. W. Williamson, of Hartsville.

Dr. Williamson was born and reared in Darlington County, the date of his birth being May 16, 1860. He was educated at Porter Military Academy, of Charleston, and received his medical education at the College of Physicians and Surgeons, Baltimore, where he graduated in 1886. He was married in 1895 to Mrs. Anna Byrd Davis, who survives him. He was a member of the Baptist Church—one liberal in his church views.

Dr. Williamson practiced his profession with diligence and with great success from the date of his graduation, in 1886, until his death. His work covered a wide field, and his patients were many and warmly attached to him.

He was a member of this association during the years of its existence and a regular attendant at its meetings to which he contributed a great deal in the discussions of papers and case reports. His unflinching good humor and wit added much to the pleasure of many meetings. Years ago he caused much interest in the statement that typhoid fever from his observation came in many cases from the open well, and while many present at the meeting at that time took issue with him, it is interesting to know that his observations were fully confirmed.

He died as he wished to die—at his work in his profession.



This association sets aside a page in its minutes to the memory of Dr. J. W. Williamson, a life member of this association, and extends to his widow and his family its sympathy in their sorrow.

(Signed)

Dr. T. E. Howle,  
Dr. William Egleston.

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### RESOLUTION

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WHEREAS, the people of our State look to the doctors of the community, in which they reside for counsel when they become ill or injured, and we believe that our people should have the care of a physician who has the proper knowledge and scientific training to treat or advise such patients during their illness and

WHEREAS, we have a State Board of Medical Examiners whose duty it is to decide upon the qualifications and scientific training of those applying for registration, as physicians, and we believe that all persons applying for licences to practice medicine, or any branch thereof, that pertains to the treatment of systemic diseases, should be examined by this Board of Examiners and required to pass on all subjects pertaining to the practice of medicine as set forth in Sections 2406 and 2412, Article 2, Volume 3, Code of Laws South Carolina, 1922, and

WHEREAS, we do not believe that Chiropractics is founded on a scientific basis, and that the passing of a bill by the General Assembly of South Carolina allowing them to practice their cult, except as provided for in Section 2412, Article 2, Volume 3, Code of Laws of South Carolina, 1922, we believe, would be a menace to the public health of our State, therefore:

BE IT RESOLVED, by The Darlington County Medical Society, that we go on re-

cord as being opposed to the passing of such a bill, and that a copy of this resolution be sent to each member of our County Legislative Delegation and to the Secretary of The South Carolina Medical Association for publication in the Journal of The South Carolina Medical Association.

The Darlington County Medical Society  
January 29, 1924.

Committee,  
G. B. Edwards, M. D.  
Julian T. Coggeshal, M. D.

---

February 14, 1924.

Dr. E. A. Hines,  
Secretary,  
State Medical Association,  
Seneca, S. C.

My dear Dr. Hines:

The following members of our society (Medical Society of South Carolina), are Honorary Fellows of the same, and I would appreciate it very much if you would let me know if any of them are entitled to Honorary Fellowship in the State Medical Association, or if you could give me the dates that any of them would be entitled to such membership.

I would greatly appreciate it.

Honorary Fellows, Medical Society of South Carolina.

Aimar, C. P.; Baker, A. E., Sr.; Buist, A. J.; Cathcart, R. S.; Green, J. M.; Jackson, H. P.; Kollock, C. W.; Parker, E. F.; Rutledge, Edw.; Scharlock, T. M.; Simons, T. G.; Wilson, Robt., Jr.

Had a rousing meeting of our Society last Tuesday night and had Dr. Paul V. Anderson of Richmond Va.

At the next meeting we are to have Dr. McCarthy of the Mayo Clinics.

Very cordially yours,  
Charles P. Aimar, M. D., President.

## Correspondence

To the Editor, Journal South Carolina Medical Association.

Sir: It was my privilege to contribute an article upon x-ray and radium therapy to the March 1923 issue of the Journal. Therein, certain statements were made that subjected me to much criticism in face of the wave of enthusiasm then sweeping the country over the alleged greater efficacy of higher voltage and shorter wave lengths in the treatment of cancerous conditions. The contentions formulated in the article were, in substance, that because we believed only radiation absorbed was effective the object should be to apply to the diseased area the least penetrating type of rays possible. It was stated upon the basis of our experiments and practice a potential of 140,000 volts need not be exceeded in deep therapy when employed through multiple portals of entry, for with such technic the maximum damage occurred in the tumor with minimum dosage ensuing in the surrounding healthy tissues. It was also asserted that in equal volumes of absorbed radiation the long wave lengths were more effective, in contra distinction to opinions then prevalent.

In justice to myself, as well as for the benefit of those interested in the subject, I would refer to the address of Dr. Robert Knox, of London, one of the most eminent authorities in the world in this line, delivered before the 24th Annual meeting of the American Roentgen Ray Society in Chicago, September 1923, and published in the January 1924 issue of the American Journal of Roentgenology & Radium Therapy. I quote from his talk as follows:

"The radiation which is absorbed by the tissue is the active agent in the production of therapeutic effects. It is probable that with the very penetrating radiation the greater percentage goes beyond the tumor and exercise practically no action upon it.

This is also borne out by actual experience in practice." Again, "It might be laid down as a definite law in radiotherapeutics that the most suitable wave length for general use should be that which is absorbed in the tissue undergoing treatment." And, "From Russ's experiments on animals it would appear that for the same quantity of hard and soft rays absorbed the effect of the softer radiation is greater, and this observation is borne out by experience in the treatment of the human subject." He states further "Do not let us become obsessed by the idea that to obtain results we must ever increase the output from our apparatus and step by step increase the voltage until we are in position to turn out roentgen rays equal to the hardest gamma ray of radium in hitherto unthought of dimensions."

Dr. Knox does not belittle the vast importance and influence of the researches dealing with high voltages, nor have I. It is brought out in his discussion (as must be obvious to anyone who has studied the matter) that in deep work a certain quality of radiation is absolutely necessary, and it is doubtless his idea to convey the impression that a judicious combination of biologic principles and physical principles should be utilized in practice. He points to the fact that utmost effort should be made to conserve the normal tissues and processes of Nature, readily endangered by over-enthusiastic technic.

I am writing this letter with the idea it may serve to vindicate the position we have taken and maintained, and at the same time to bring the paper of Dr. Knox to the attention of the medical profession since it unquestionably represents a masterly presentation of the subject.

Leonard J. Ravenel, M. D.

Florence, S. C.  
January 28, 1924.

## EDITORIALS

(Continued from page 32)

**THE LAY PRESS AND THE CHIROPRACTOR BILL**

From the Sunday Record, Columbia, February 10, 1924 we cull the following very interesting editorial.

**LET THE MEDICAL LAW ALONE!**

Those most interested have introduced a bill in the General Assembly of South Carolina providing that a board shall be created whereby chiropractors may license their own applicants to practice medicine in this State. We are most emphatically opposed to the measure, in general and in detail. The statute law of South Carolina already amply provides for the admission of persons fitted to practice medicine, and those who cannot face the music on that basis should be content to blow out the candle and call it a day.

Under the present law, no person shall practice medicine or surgery within the State unless he or she is 21 years of age, and either has been authorized so to do, pursuant to the laws in force at the time of his or her authorization, or later, as subsequent divisions of the act to regulate the practice of medicine in South Carolina may provide. The Record is of the opinion that that act, which is now standing and in force, gives an absolutely square deal to anybody who is fitted to practice medicine in this commonwealth.

Certain classes of "medicine men"—beg pardon!—seem to want to practice their alleged "cure-all" arts with a free hand, under the allegation that they cure the patient without giving him medicine. We are glad to say that the framers of the laws of this State did not overlook that factor and they provided that any person shall be regarded as practicing medicine within the meaning of the law, who shall treat, operate on or prescribe for any physical ailment of another, or who shall engage in any branch or speciality of the healing art, or who shall diagnose, cure or relieve in any degree, or profess or attempt to diagnose, cure or relieve any human disease, ailment, defect, abnormality or complaint, whether of physical or mental origin.

All those who believe that these safeguards around the public health borders of South Carolina are too severe, are respectfully in-

vited to hold up their hands. For one, The Record would be pleased to note the color of their hair. The law now provides for regular and stated examinations for all applicants who desire to practice medicine in South Carolina in the following subjects: Anatomy, Physiology, Hygiene and Sanitary Science, Materia Medica and Therapeutics, Chemistry, Toxicology, Urinalysis, Bacteriology, Surgery, Practice of Medicine, Pediatrics, Obstetrics, Gynecology and Medical Jurisprudence.

The chiropractors will have to come to court with a far better record than they now have before the South Carolina legislature will be willing to turn an army of them loose to ply their manipulations of the spine on the afflicted of this commonwealth under their own flag. If such is not the fact, then, we greatly misjudge our legislators. And, since the chiropractors have started their drive for more power down this way we think it not amiss to lay before the legislature, this editorial from the New York Times, under date of December 21, 1923.

**CHIROPRACTIS AND DIPHTHERIA**

What seems to be an undoubtable case of letting a child die for lack of easily available treatment was presented in yesterday's papers, and should emphasize the present movement to rid the city of its swarming quacks. A child attacked by diphtheria received no treatment except such as was given by a "chiropractor," and not until the time for real medical aid was past did the parents call in a doctor who knew that this disease is not one to be cured by manipulation of the spinal column.

It is true that, even with all the help that medical science can give, children sometimes die of diphtheria. Beyond any question, however, the timely administration of antitoxin so greatly increases the chances of recovery that failure to use it is little less than criminal, is not at all less, indeed, when the failure is due to a man who, calling himself a doctor, or allowing himself to be called one, resorts to a method of cure from which by no possibility can benefit follow.

The case well illustrates the utter emptiness of the claim by "chiropractors" that they do not "practice medicine." They do not, in the sense that their practice is absurd and in most cases worse than useless, but they do in the sense that they pretend to diagnose disease that they accept practically any patient not obviously moribund, and that they mislead the ignorant by their pretenses of superior medical ability.

Of course, those charlatans can point to "cures" effected and can present laudatory "testimonials" with the signatures of people who honestly believe themselves to have been "healed." This is all quite narrowly restricted class of maladies, but these fellows do not know what those maladies are and what they are not, and their so-called "cures" should be credited to that "vis medicatrix naturae" which always tries and often succeeds, even in spite of ignorant or vicious interference, in bringing about recovery.

That is the "something in it" of every quackish cult—that and the power of suggestion, which sometimes can be effectual, no matter how stupidly applied.

Under these circumstances, Mr. President and Mr. Speaker of the South Carolina General Assembly, The Record moves that the bill for the chiropractic examining board be laid on the table so hard that it may shake the dome of the capitol.



POST-GRADUATE INSTRUCTION

---

Many of our members are considering post-graduate courses therefore the following information from the Bulletin of the Fellowship of Medicine and Post-Graduate Medical Association of London, February, 1924, may prove helpful.

Much activity has recently taken place in the Post-Graduate centres of the world. Indeed, it would seem that the pre-war conditions have been generally re-established. In glancing at the medical journals of the respective countries it is impressive to note the prominence now being given to Post-Graduate matters. We may first turn to the Commonwealth of Australia. In a leading article in one of the Australian medical journals the writer says: "The organization of Post-Graduate Courses demands time, skill, tact and enthusiasm. Success can only be attained if the responsibility for the smooth working of the Course is accepted by one or two competent persons. The plan is drawn up by a committee composed of men engaged in teaching and thoroughly conversant with educational methods. The lecturers and demonstrators are selected with care and circumspection, and the whole-hearted collaboration of each is enlisted. Judgment is required in order that the available time be used to full advantage without imposing too great a strain on the attention of the members of the classes."

The writer further continues: "It is recognized that the majority of medical practitioners have become unaccustomed to crass changes of direction of thought. For this reason some harmony is sought between subjects of lectures or demonstrations held in quick succession. And, above all, the lecturers and demonstrators are invited to arrange their lessons to suit the occasion and to fill the needs of the members of the classes. The temptation to use the opportunity for any indirect personal advantage has to be resisted." From this quotation may be gathered the spirit which is animating the promoters of Post-Graduate instruction in Australia. Stress, it will be noted, is especially laid upon skill, tact and enthusiasm, and whole-hearted collaboration among those engaged in the work.

We may turn to Vienna, the pioneer in Post-Graduate teaching. Despite the severe

economic conditions prevailing, the latest report shows that the Vienna Medical Faculty has regained its former reputation as a Post-Graduate centre. Medical men from America are going increasingly to the Austrian capital, especially seeking Post-Graduate teaching in ear, nose, and throat diseases, materia medica, and laboratory work. Pathology is another subject which provides full scope for teaching purposes, centred around the pathology museum, where many fresh specimens, from post-mortem examinations, are on exhibition every day. Again, much teaching is available in the various surgical clinics. It has, however, to be remembered that unusual facilities exist for the attendance of American medical men. There is the American Medical Association in Vienna, by which everything is made easy for visitors from the United States. Arrangements for the classes they wish to attend are drawn up, and information is provided in regard to every necessary detail associated with their work.

We come now to America. To understand the extent to which Post-Graduate education claims attention in the United States, it is only necessary to glance at the advertisement pages of one of the medical journals—the Journal of the American Medical Association. The number of these announcements is remarkable. But the conception of Post-Graduate teaching in America is higher than that elsewhere. For example, in connection with its "Graduate School of Medicine," the University of Pennsylvania offers Post-Graduate medical degrees after a successful examination in the various Courses. The University of Minnesota, with which the Mayo Foundation, Rochester, is associated, offers "Graduate" Fellowships in special fields of medicine. In this scheme the work is planned to give men of good ability opportunity to fit themselves for teaching, research, and consulting practice in their respective specialties. Many of the chief hospitals in the States issue Post-Graduate announcements, among which may be mentioned the Post-Graduate Medical School and Hospital, New York; the Post-Graduate Hospital and Medical School in Chicago; and the Illinois Post-Graduate Medical School.

Quoting from another American medical journal, we are told "That the hospital of the present day has not completely fulfilled its place in the community if it limits its func-

tions to the care of the sick within its walls, and the practical preparation of the student for his later duties in life. It has also a very important part to fill in the post-Graduate education of the general practitioner. Only of late years has the profession awakened to this vitally important fact." And such, in crystallized form, is the view in America of the value and necessity of Post-Graduate teaching. Again, this view is shared by laymen in the United States, as witness the immense sums which philanthropists have contributed to the promotion of Post-Graduate schemes. One comment may here be added. Post-Graduate enterprises require essentially to be conducted upon business lines; the business factor in their organization is essential to their success. That has been amply proved in the case of those which have succeeded. It is then that skill, tact and enthusiasm are enabled to attain the full measure of their worth.

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#### DEATH OF DR. CORNELL

---

As we go to press we learn of the death of Dr. W. P. Cornell Associate Editor of the Journal. We clip the following information from the State of February 24th.

While paying a professional visit to a home in New Brookland, where he had been called in consultation, Dr. William Paterson Cornell, well known Columbia physician, died suddenly about 11:30 o'clock yesterday morning. The cause was angina pectoris.

Dr. Cornell specialized in the treatment of the diseases of children and also was pediatricist for the state board of health. Prior to coming to Columbia in 1920 he was temporarily out of active practice of his profession, giving three years to developing a tin mine at Lincolnton, N. C. He was for 15 years professor of pediatrics in the Medical College of South Carolina, leaving that chair in 1917 when he became interested in the mine.

Dr. Cornell came to Columbia with a statewide reputation and soon became prominently identified with his profession here. He was made secretary of the Columbia Medical society. He was the first

president of the South Carolina Pediatric society. He was associated editor of the South Carolina Medical Journal, on the faculty of the Southern Pediatric seminary at Saluda, N. C., and member of the following medical organizations: South Carolina Medical society, American Medical association, Southern Medical association and the Tri-State Medical association.

#### FROM NEW JERSEY

In 1895 William P. Cornell came to Charleston from his home in Perth Amboy, N. J., and took up his studies in the Medical College of South Carolina. His sister, now dead, was the wife of the late Dr. R. Barnwell Rhett, and it was at Dr. Rhett's suggestion that he came to this state to get his professional training. He was graduated in 1898. Then he served six months as an intern in the St. Francis Xavier hospital. A postgraduate course was taken at the College of Physicians and Surgeons in New York, after which he became an intern in City hospital, Blackwell Island, New York. On the death of his brother-in-law, Dr. Rhett, he returned to Charleston, where he lived until 1917.

Dr. Cornell was born in Perth Amboy, May 27, 1878, and therefore would have been 46 had he lived a few months longer. He was the son of Richard Mortimer Cornell and Margaret Butler Cornell of New York and Perth Amboy. Both his father and mother are dead. One sister, Mrs. A. H. Hardy, Great Kills, Staten Island, New York, is living.

April 18, 1903, Dr. Cornell married Miss Jeannie Ogden Miller of Perth Amboy. She and four children survive: Miss Lucy Cornell, who is in training at Emergency hospital, Washington; Bloomfield Cornell, a midshipman at the United States naval academy, Annapolis, and Misses Margaret and Amy Cornell of Columbia. Mrs. Cornell is one of the best known religious workers in the state, having been the first president of the woman's auxiliary of the Episcopal Diocese of Upper South Carolina,

and otherwise actively engaged for her church.

#### DISTINCT SHOCK

The death of Dr. Cornell came as a great shock to his many friends. He was a man of many fine characteristics. His fellow members of the profession, not only recognized his medical ability and skill, but also his worth as a citizen. He was a man of unquestioned courage, of high ideals and deep regard for "the other fellow." He gave freely of his time to the Children's clinic and other charitable organizations.

Dr. F. M. Routh, president of the Columbia Medical society, said last night:

"In the death of Dr. Cornell the Columbia Medical society has lost one who has been an efficient officer, untiring in his zeal for the betterment and advancement of the society; one who at all times represented the highest of personal and professional ethics,

and who never sacrificed his ideals of honesty and integrity for commercial consideration.

"In truth he was one who in the practice of his chosen specialty lived up to the teachings of the Great Physician in his attitude to and treatment of the poor children of the state."

#### FUNERAL TODAY

Services will be held at Trinity church at 3:00 o'clock this afternoon and the funeral party will leave on the Augusta Special (Southern railway) at 4:35 p. m. for Newark, N. J., where interment will take place tomorrow afternoon.

The columbia Medical society will act as an honorary escort this afternoon and the pallbearers will be: Drs. N. B. Heyward, S. E. Harmon, I. D. Durham, Floyd D. Rogers, W. A. Boyd, D. S. Black, F. M. Routh and E. W. Barron.



## INTERNAL MEDICINE

*By N. Barnell Heyward, M. D., Columbia, S. C.*

Perhaps, there is no condition as frequent in every physician's practice (or it would be better to say among his patients) as oral sepsis or pyorrhea alveolaris. It is so common that we might say that everyone has pyorrhea and be right in 95% of cases. We are so accustomed to observe this condition that we are apt to lose sight of the fact that it is frequently the cause of systemic or general infections.

It is a well known fact that high blood pressure is caused by some toxin or poison circulating in the blood. We only recently thought that high blood pressure was caused by kidney disease but now it is a well known fact that the high blood pressure and the associated kidney disease are both

caused by the same poison of toxin circulating in the blood and it is our duty to our patients of this type to find this source of toxæmia, if possible, and eliminate it.

I want to call it to the attention of the physicians of the state that pyorrhea alveolaris is a fairly frequent cause of high blood pressure. A patient seen recently with a blood pressure of S. 220, D. 120 with albumin and casts in her urine and in a semi-comatose condition presented nothing in her physical examination to account for her condition except a foul and extensive pyorrhea. Her urine cleared up, her mental state cleared up and her blood pressure dropped to S. 135 on the extraction of her teeth and the proper treatment of her gums.

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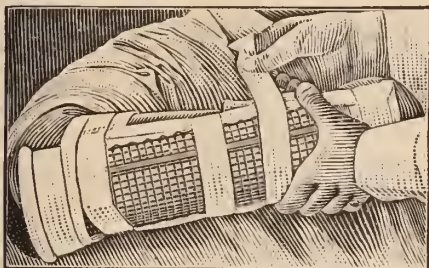
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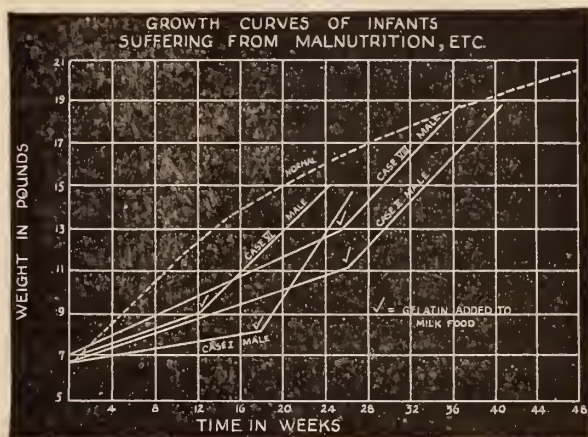
ing flour to make a healthful food product that will perform an important service in every household. With the assistance of the chemist and the chemical laboratory they have succeeded in perfecting a food product that simplifies home cooking, eliminates many chances for error in mixing, produces a perfectly raised baking, and at the same time effects a remarkable saving for the housewife.

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Dr. Albert F. Brawner, Res. Physician.

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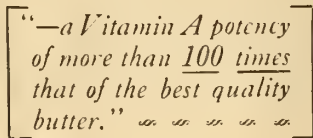


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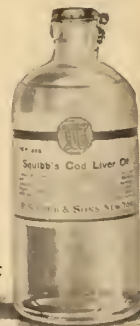
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# The Journal OF THE South Carolina Medical Association

VOL. XX.

GREENVILLE. S. C. MARCH, 1924

NO. 3

## ORANGEBURG NUMBER

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Charleston, S. C.

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An Institution Devoted to the Study of Infant Nutrition

# The Journal

## OF THE

### South Carolina Medical Association

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Published Every Month Under the Direction of the Board of Councilors.

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## EDITORIAL

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### ORANGEBURG, A CITY THAT OFFERS OPPORTUNITY

The people of Orangeburg are looking forward with a great deal of interest to the meeting of the South Carolina Medical Association in this city on April 15, 16, 17, 1924. Orangeburg, better known as the "City on the Edisto," is situated fifty miles South of Columbia on the main line of the Southern Railroad between Charleston and Cincinnati, and eighty miles East of Augusta on the main line of the Atlantic Coast Line Railroad between Augusta and Washington, with a population of about 11,000, including the suburban sections, is one of the most noted sections of our Southland from an agricultural standpoint.

\*Deceased.

The City of Orangeburg has just completed the paving of fifteen miles of streets and twenty-five miles of paved side-walks including one and a quarter miles of "White Way," at an expenditure of about \$1,000,000.00. Plans are now on foot looking to the building of a large municipal building which will cost about \$150,000.00, modern one hundred room hotel, masonic temple, public library and numerous residences. Orangeburg has all the up-to-date facilities to be found in cities much larger—electric lights, water, sewerage and well equipped fire department. The city is under the commission form of Government with a mayor and two councilmen, her citizens are thrifty and progressive, and Orangeburg takes high

rank in educational, industrial, commercial and agricultural activity.

Orangeburg's greatest asset is her back country. The soils are varied and are divided into twenty-seven different classes. Practically every crop that will grow in the temperate zone will do well here. The soils are especially adapted to cotton, corn, small grains, truck crops, tobacco, fruits and nuts. The total wealth in 1920 of the County was estimated to be \$25,680,124.00. In addition to being located in a good farming center, Orangeburg's commercial importance is shown by the fact that four strong banks and three building and loan associations, with a combined capital of \$530,000.00, and deposits of over \$5,000,000.00, are doing a splendid business for the expansive and constantly increasing trade which is pouring into the city from hundreds of farmers who do their marketing and buy their supplies in the city. Wholesale grocers, drug stores, lumber plants, and others are located here, also cotton mills, oil plants, feed mills, fertilizer plants, soft drink plants, shirt factory, veneer factories, machine shops, ice cream factory, stave factory, hard mill plants, two ice plants, mercantile establishments modern and progressive, able to accommodate country shoppers.

One of Orangeburg's biggest assets is her public school system, of which Professor A. J. Thackston is head, embraces two white graded schools and the high school. There are about 1500 white students attending the public schools and these come from miles out of the city. The new and modern high school building which is one of the finest buildings of its kind in the State, contains twenty-two class rooms, study hall, laboratory, offices, and other essentials that go with the building. A large and modern auditorium is now being built which will seat about 1500 people. The Dunton Memorial School for colored people has just been completed, where 1400 colored children are now well cared for, in a three story brick school building with fifteen class rooms and all other modern equipment.

There is also situated at Orangeburg two large negro colleges State Agricultural and Mechanical College which is owned by the State and Claflin University which is supported largely by Northern interests. Claflin University has about 500 students. The State Colored College has this year about 1400 students, and among the things that are taught at this school for the colored people are agriculture, home economics, different trades as carpentry, masonry, black-smithing, wheel-wrighting, auto mechanics, painting, harness and shoe making, tailoring, etc., for the practical education of the colored people. The plant which consists of several fine buildings and adjoining farm is valued at about \$750,000.00. A large percentage of the work on the buildings has been done by student labor. The college also keeps about thirty cows and has a modern dairy. Dr. R. S. Wilkinson, president of State College, invites the members of the South Carolina Medical Association to visit the plant during their stay in the "City on the Edisto" and see what is being done for the colored people by the State of South Carolina.

Orangeburg also boasts of her amusements which is of great assistance to the development of the young people of the community. The city playground Commission was appointed by the city council several years ago for the purpose of establishing and maintaining a playground for the children of the city. A beautiful location on the banks of the Edisto River has been set aside by the city for this purpose and extensive improvements have been made, and today within four blocks of the center of the city is an up-to-date playground upon which has been spent thousands of dollars, which is modernly equipped for the entertainment and pleasure of her children. The Orangeburg Country Club, situated a mile and a half to the North of city affords a nine hole golf course, club house and swimming facilities. The visiting doctors are extended the use of the grounds during their stay in April. A commercial swimming pool located here proves popular during the summer





Crowd seen on Streets of Orangeburg one of the Bargain Days during "August Bargain Period," Orangeburg, S. C.

months and the nearness of the Edisto River tempts many citizens to fishing and hunting in season. A complete athletic field has just been completed and an additional football gridiron at the Orangeburg County Fair grounds attracts many contents from the different colleges of the State to this point. A public library, supervised by the Dixie Club, adds much to the interest of those inclined to books.

Eleven churches are located in Orangeburg, all of the leading Protestant denominations and the Catholics have churches here.

Orangeburg is indeed fortunate in having live Rotary and Lions Clubs, while the Young men's Business League, made up of two hundred of the liveliest young men of the city are doing their bit in pushing Orangeburg and the surrounding sections to the forefront.

One of the big helps to any community are the newspapers and Orangeburg is proud of having two progressive papers. One of them, The Times and Democrat is a tri-weekly, while the Orangeburg Sun is a

weekly. Both of these papers are always on the alert for the betterment of Orangeburg and the County at large, and these papers are today stressing progressive measures, and their help in the past is seen in the progress that Orangeburg is steadily making.

#### ORANGEBURG AS A MEDICAL CENTER

Orangeburg is justly proud of her medical men, there being fifteen white and three colored physicians, in the city. Dr. Vance W. Brabham is president of the local association and Dr. Geo. M. Truluck is secretary and treasurer.

This association maintains a high standard and in addition there is splendid spirit of fellowship and co-operation among the members of the profession. At present the organization is planning to give those who attend the annual meeting of the South Carolina Medical Association one of the warmest welcomes, as well as the best time

they have ever had at a similar gathering.

While there are larger hospitals in the South than the Orangeburg Hospital, it is safe to say there is none provided with better equipment for the treatment of patients. This institution was founded by Dr. Charles A. Mobley, who still remains as its directing force and surgeon-in-chief. The property comprises several acres in a quiet section of the city, being easily accessible to the business district. The main building at present accommodates approximately forty patients, and there will be erected in the spring a new three story brick building as an addition to the present building, which will accommodate about forty more patients. Any physician of Orangeburg County and the lower part of the State in good professional standing is permitted to place his patient here for treatment, all major operations, however, being performed by Dr. Mobley.

The Orangeburg Hospital including heating, has electric lights and motors, and modern up-to-date X-Ray department; sterilizing outfit for instruments and utensils and a perfect system of sanitation throughout the premises. One of the most important departments now at the hospital is the Department of Deep Therapy, for the treatment of malignancies, such as cancer and similar diseases. This machine is of the latest design to be operated with the new high milli-ampere tube now in process of development by Dr. Coolidge. The standard 8 m. a. Deep Therapy tube is being used. The hospital at present employs twenty-one nurses, and two colored nurses are employed in the colored ward. The new brick building which will be built in the spring will also contain an additional operating room, and be a great addition to the present crowded buildings. In fact everything is in keeping with a first class hospital and the patronage has proven that the Orangeburg Hospital is an institution that will stay. The following staff of physi-

cians are identified with the work of the institution: Dr. Charles A. Mobley, director and operating surgeon; Dr. G. M. Truluck, eye, ear, nose and throat; Dr. B. G. Barrentine, urologist and Mrs. M. A. Williams, charge of the X-Ray Department. Orangeburg and the lower part of the State has reason to be proud of this splendid hospital a fitting monument to the enterprise and professional knowledge of Dr. Mobley.

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#### UNITED STATES FISH HATCHERY

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One of the most interesting sights at Orangeburg, S. C., is the United States Fish Hatchery, which is located about one and one half miles to the South of the city. The station is in charge of Capt. G. W. N. Brown, with three assistants.

Steps were taken for securing the fish hatchery by a number of interested citizens of the city in 1913, but the station was not in operation until 1916. The reservation contains about fifty acres of land, through which originally ran a small stream of water, which stream now supplies the water for the work done at the station. There are thirteen ponds used for brooding purposes, and six concrete ponds or retainers, and three reservoir ponds. There has been spent to date about \$38,000.00, where there are raised hundreds of young black bass, brim, warmouth and crappie, and these are shipped to various points in South Carolina, North Carolina and Georgia. Capt. Brown states that this station is one of the most successful ponds and cultural stations in the service.

The bass are shipped away in the Spring time, while the brim and warmouth are shipped away in the fall months. These fish may be secured of the Commissioner of Fisheries at Washington, D. C., and orders are filled in the order received.

An invitation will be extended the South Carolina Medical Association to visit the station during their stay in the city.



Orangeburg Hospital, Orangeburg, S. C.

### PRESIDENT L. O. MAULDIN AND THE SECRETARY VISIT COUN- TY SOCIETIES

Inspiring meetings at Columbia, Orange-  
burg, Charleston.

The President and Secretary received a most royal welcome on a recent tour of County Medical Societies. The Columbia Society under the Presidency of Dr. F. M. Routh is making rapid strides. A splendid meeting was held in the Medical Building on Monday evening, March 10th.

Dr. R. P. Vinson of the Mayo Clinic gave a most illuminating address on "Diseases of the Oesophagus". Dr. P. V. Mikell presented a most interesting case of "Vincent's Angina". Dr. M. C. Standard has been elected Secretary to fill the unexpired term of Dr. W. P. Cornell deceased.

It was noted that Dr. C. W. Barron a popular member of the Columbia Society was ill in a hospital in Florida and expressions of sympathy were generally heard.

#### ORANGEBURG

The President and Secretary met with the Orangeburg Society March 11, and went over every detail of the arrangements for the coming meeting of the State Medical As-

sociation April 15th, 16th, 17th, 1924. The Orangeburg physicians are highly enthusiastic over the prospect for a large attendance and a successful meeting. Dr. Vance Brabham is the President of the Orangeburg Society and though recently out of the hospital he was recovering nicely from an operation for appendicitis and getting in fine trim for leadership of the various committees preparing for State meeting. President Mauldin and the Secretary were entertained at dinner by the Rotary Club, met many of the citizens and were invited to deliver addresses on the work of the State Medical Association. The visit to Orangeburg was indeed most delightful and is a forecast of the hospitality awaiting the entire membership of the State Medical Association.

#### CHARLESTON

The Medical Society of South Carolina (Charleston County) is now one hundred and thirty-four years old. Dr. C. P. Aimar many years the able treasurer of the South Carolina Medical Association is the President. The program of the evening, March 11th, consisted largely of an address by Dr. R. P. Vinson of the Mayo Clinic on "Cardio Spasm" and a very able address by Dr. L. O. Mauldin President of the State Medical Association who outlined the details of the progress of the State Medical Association and the prospects for future advancement.

The meeting was held in the rooms of the Society in the Roper Hospital. The attendance was large and after the business session was over delightful refreshments were served.

#### SPARTANBURG

The Secretary-Editor recently had the opportunity of observing the enthusiasm of the Spartanburg Society under the strong guiding hand of the new President Dr. W. B. Lyles. This Society turned over a new leaf the first of the year in many



respects and the meetings are highly scientific, well planned and the attendance is large. At the time of our visit Dr. D. L. Smith of Spartanburg contributed a paper bringing out many practical points on the "Care of the Baby." Dr. Kirkpatrick of Pacolet read a paper on "Fractures of the Long Bones" showing the results of treatment after many years as disclosed by the X-Ray. Dr. Beeler of the State Hospital presented a proposition to establish a Psychiatric Clinic which was approved by the Society. A delightful dinner was served by the Spartanburg County General Hospital, the place of meeting. A dinner is provided by the Society at this magnificent Hospital every month—last Friday evening.

#### GREENVILLE

The Secretary-Editor was honored by an invitation to attend the meeting of the Greenville County Medical Society in the Directors room of the new Woodside Building March 3, and to open the discussion on the special topic of the evening Rickets. Two admirable papers on this subject were presented by Dr. D. L. Smith of Spartanburg and Dr. R. M. Pollitzer of Charleston. The discussions generally were of a wide range by a number of the members of the Society. During the course of the meeting Lieutenant Colonel C. B. Earle of Greenville Chairman of the Military Committee of the State Medical Association presented the claims of the Medical Reserve Corps. Dr. W. H. Powe is the President of the Greenville Society which is one of the largest Societies in the State and for many years has been a leader in scientific progress.

#### PROVISIONAL PROGRAM SOUTH CAROLINA MEDICAL ASSOCIATION

Orangeburg, S. C., April 15, 16, 17, 1924

Address in Surgery: Dr. J. C. Bloodgood, Baltimore, Maryland.

Address in Medicine: Dr. William A. Pusey, Chicago, Ill., President-elect American Medical Association.

(Papers to be re-arranged by Scientific Committee on Final Program. Reading time of all papers except invited guests 15 minutes.)

#### Diabetic Symposium, April 16

Pathology of Diabetes.

By F. H. Dieterich, M. D., Charleston, S. C.

Metabolism in Diabetes, or Diabetes a Disease of Faulty Metabolism.

By G. R. Wilkinson, M. D., Greenville, S. C.

General and Special Therapy of Diabetes.

By J. Heyward Gibbes, M. D., Columbia, S. C.

The Position of Insulin in Diabetes.

By Robert Wilson, M. D., Charleston, S. C.

The Prevalence and Diagnosis of Diabetes.

By N. B. Heyward, M. D., Columbia, S. C.

Surgery in the Diabetic.

By R. Lee Sanders, M. D., Memphis, Tenn.

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Surgery of the Prostate, Recent Advances, Lantern Slides.

By N. Bruce Edgerton, M. D., Columbia, S. C.

Prenatal Sight and Hearing as Factors in the Child's Destiny.

By Edward F. Parker, M. D., Charleston, S. C.

Blood Chemistry.

By C. C. Craft, M. D., Florence, S. C.

Treatment of Esophageal Stricture.

By H. W. Rice, M. D., Columbia, S. C.

Office Treatment of Diseases of the Anus and Rectum—A Specialty.

By F. M. Durham, M. D., Columbia, S. C.

Newer Problems in Nutrition.

By William Weston, M. D., Columbia, S. C.

Urology in its Relationship to Other Special Branches of Medicine and Surgery.

By M. H. Wyman, M. D., Columbia, S. C.

The Management of Supra-Condylar Fractures of Humerus—Lantern Slides.

By William A. Boyd, M. D., Columbia, S. C.

Vincent's Angina.

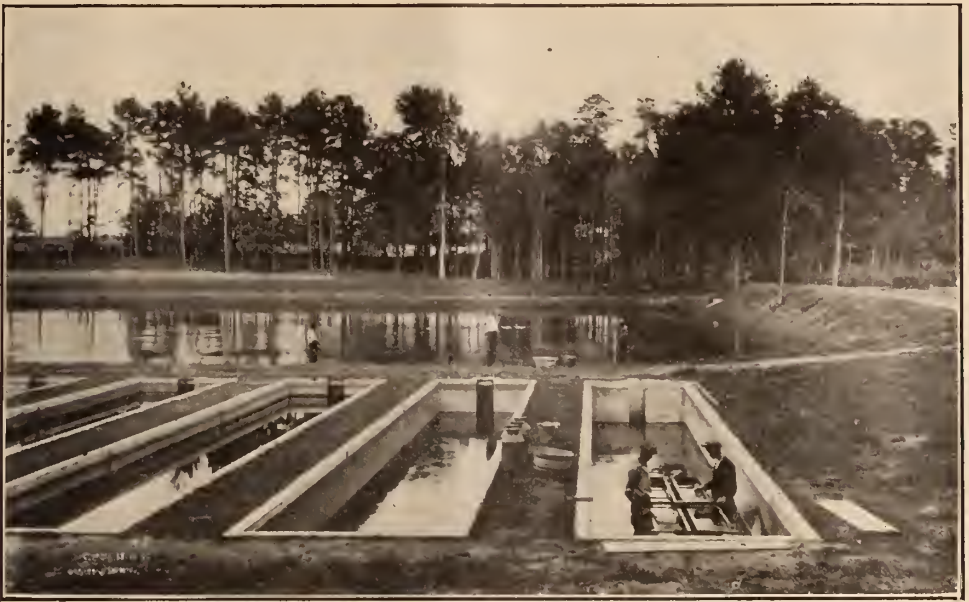
By P. V. Mikell, M. D., Columbia, S. C.

Modern Dermatology.

By J. Richard Allison, M. D., Columbia, S. C.

Congenital Pyloric Stenosis.

By Roger G. Doughty, M. D., Columbia, S. C.



United States Fish Hatchery, Orangeburg, S. C.

**The Importance of Early Symptoms in Mental Diseases.**

By W. M. Bevis, M. D., Columbia, S. C.

**Benign Tumors of the Small Intestine Causing Intussusception.**

By H. S. Black, M. D., Spartanburg, S. C.

**Significance of Gastric Hemorrhage.**

By A. E. Baker, M. D., Charleston, S. C.

**Eczema of Infants.**

By D. L. Smith, M. D., Spartanburg, S. C., Essayist for the S. C. Pediatric Society.

**A consideration of the Underactive Thyroid.**

By W. H. Higgins, M. D., Richmond, Va.

**Preventive Pediatrics.**

By R. M. Pollitzer, M. D., Charleston, S. C.

**Amebic Dysentery.**

By W. H. Wallace, M. D., Spartanburg, S. C.

**Some Aspects of Uraemia.**

By J. H. Cannon, M. D., Charleston, S. C.

**A Brief Consideration of the Psychoneuroses.**

By E. L. Horger, M. D., Medical Director State Hospital, Columbia, S. C.

**Symposium On Obstetrics and Gynecology, April 17**

**Ante-Partum Care. (What Should be Routine and is Possible to Offer.)**

By L. C. Sheent, M. D., Orangeburg, S. C.

**Special Points in the Delivery of Normal Cases. (Uses and Abuse of Cathartics, Douches, Pituitrin, H. M. C.)**

By Frazier Wilson, M. D., Charleston, S. C.

**Diagnosis and Treatment of Placenta Previa.**

By Lester A. Wilson, M. D., Charleston, S. C.

**Post-Partum Care. The Mother.**

By Jane Bruce Guignard, M. D., Columbia, S. C.

**Neo-Natal Care. The Baby (Nursing Hours, Clothing, Drugs.)**

By Wythe Rhett, M. D., Charleston, S. C.

**Obstetric Contributions to Gynecologic Material.**

By Robert E. Seibels, M. D., Columbia, S. C.

**Gynecologic Contributions to Obstetric Difficulties.**

By G. T. Tyler, M. D., Greenville, S. C.



Orangeburg Country Club, Orangeburg, S. C.

**BARNWELL COUNTY MEDICAL SOCIETY  
AND STATE MEDICAL ASSOCIATION  
WIN CASE**

**We Are Indebted to the State for the Information as follows:**

**Monday Consumed With Case of Physician  
Expelled From Society for "Abrams  
Methods."**

Barnwell, March 13.—The court of common pleas convened here Monday morning with Special Judge Simpkins presiding. Very few cases have been disposed of so far. Practically all of Monday was given over to arguments in the injunction proceedings of A. B. Patterson of this city, against the Barnwell County Medical Society and the South Carolina Medical Association. This proceeding grew out of the action of the board of censors of the Barnwell County Medical Society, which, August 29, 1923, recommended that Drs. A. B. Patterson of Barnwell and Ryan A. Gyles of Blackville be expelled from the Society, the recommendation being based on Article 3 of the constitution of the organization, which provides that "every legally registered physician, residing and practicing in Barnwell county, who is of good moral and professional standing and

who does not support or practice, or claim to practice, any exclusive system of medicine, shall be eligible to membership therein." The society held that the "Abrams treatment" is an exclusive system of medicine.

Dr. Patterson appealed from the decision of the local society to the South Carolina Medical association, which upheld the action of the society. He then secured an order from Judge H. F. Rice requiring the society and the association to show cause as to why he should not be reinstated in the two organizations and their action in expelling him be declared null and void. Judge Simpkins ruled that the defendants in the injunction proceedings acted "substantially in accordance with their constitution and by-laws" and "that" the action of the defendants herein should not be disturbed.

The action of the medical association in expelling Dr. Patterson does not affect his right to practice medicine within the state of South Carolina, however, nor does it prevent him from practicing the Abrams treatment. The main question before the court was whether or not the defendants were acting within their rights in expelling the plaintiff from membership in the organizations.

Dr. Patterson, was represented by J. O. Patterson, Jr., and C. C. Simms, while Nelson & Mullins and Harley & Blatt appeared for the defendants.



## ORIGINAL ARTICLES

### THE PRESENT INFLUENZA EPIDEMIC IN INFANTS AND CHILDREN

*By C. Williams Bailey, M. D., Spartanburg, S. C.*

This paper is based entirely on an observation of influenza as seen during the past few months in and near Spartanburg, but reports from other parts of the State seem to agree with our experience. Although the total number of cases this year cannot be compared with the pandemic of 1918, it is safe to say that the babies and young children have suffered in much larger proportion. In fact one could appropriately call this a babies' epidemic.

The most striking feature of the disease is the remarkably close adherence to the so-called gastro-intestinal or abdominal type. A description of the usual case will explain this statement. The child seems fretful and restless for a day or two, or there may be no recognizable prodromal symptoms. The nose begins to run in some cases, but more frequently there is only a mild dry pharyngitis. Suddenly the temperature becomes elevated to 102 to 105 degrees, depending on the severity of the attack; and if the child be old enough to complain, all of his attention is centered on a pain in the upper part of the abdomen. This pain is sometimes so severe that the little patient is doubled up as though he had acute appendicitis. There is usually vomiting and this is sometimes quite distressing. The appetite is lost almost completely. Most of the children have already been given a purgative before the physician is called, but in those who have not been dosed there is either constipation or else there is no irregularity of the bowels.

A few cases have had a fairly severe diarrhoea, but the absence of diarrhoea of any consequence in the vast majority of cases is at variance with earlier accounts of this form of influenza. Cough is very annoying and persistent from the first, and it is of the dry pharyngeal type. Occasionally the patient complains of pain in the side on coughing, the temperature is constantly elevated to 104 to 105, respirations are very rapid and shallow, and there is an expiratory grunt. In these cases there is also considerable abdominal pain, and it is hard to determine whether or not all of the pain is above or all of the pain is below the diaphragm. One, of course, suspects pneumonia or pleurisy, but the chest findings and blood count fail to support the suspicion; and in two or three days the acute symptoms subside.

Physical examination shows a diffuse inflammation of the whole upper respiratory tract with usually one or both ears involved. The tonsils share in this inflammation but they seem to be paler than the naso-pharynx many or few diffusely scattered rales. The chest is often negative, but often there are and no follicular exudate appears. The upper part of the abdomen is tender, usually most acutely over the epigastrium. The blood count is true to type, showing a leucopenia with a low polymorphonuclear and high lymphocyte count. The urine is negative with the exception of acetone in some cases.

If the case remains uncomplicated, the temperature after two or four days falls rapidly from its fastigium to between 99 and 100 degrees F. Vomiting ceases after the first day or two, and the abdominal pain subsides gradually. For the next few days cough, which becomes loose, slight constant fever, and anorexia are the only symptoms of importance. Prostration and weakness

are overcome remarkably early, and, in contradistinction to adult cases, convalescence, after the fever leaves, is rapid.

Only the mildest cases, which clinically are only bad colds, escape some complication.

Otitis Media is almost invariably present. It often causes comparatively little pain, and usually subsides without suppuration or operative measures. When suppuration does occur the discharge rapidly diminishes and ceases altogether in a few days. In quite a number of cases paracentesis gave immediate relief and yet the ear did not discharge any pus. When the drum is only slightly inflamed, the redness is limited to the extreme periphery and around the contiguous part of the external canal. In no case has there been any signs of mastoid involvement.

A slight bronchitis is so often present that it can hardly be called a complication. Sometimes, however, it is quite severe and persists for several weeks. When pneumonia develops, it seems to be lobar clinically, but the temperature subsides in many cases by lysis, and in many cases several parts of the lungs are successively consolidated. Acute pleurisy sometimes accompanies a severe bronchitis, but it usually clears up without further trouble.

An acute cholangitis with well marked jaundice and considerable tenderness over the liver has been seen in a considerable number of cases. These cases run a typical course of acute cholangitis, and the jaundice subsides after about two weeks. Owing to the apparent infectiousness of this condition as evidenced by its rapid spread, the diagnosis of Weil's disease might seem applicable. However, against this are the facts: First, that an epidemic of influenza is known to be present, and second, the onset and early symptoms are identical with those in other cases without any jaundice.

Acute laryngitis is another frequent and sometimes distressing complication. Breathing may be very little embarrassed, or the obstruction may become very alarming. In

one case intubation was attempted, tracheotomy had to be done as an emergency measure, and the baby died. There is always a brassy cough and considerable hoarseness, though the voice is seldom lost entirely. This condition differs from the ordinary croup in that the laryngeal symptoms persist through the day unabated, and the attack lasts several days, sometimes more than a week.

Cardiac complications are usually slight but sometimes most alarming. Often the pulse is relatively slow for the existing fever, and the heart sounds have a muffled quality. One little boy four years old suddenly had a complete circulatory collapse during convalescence. He became cyanotic and cold and his pulse was very weak and rapid. He soon recovered but the next day after fussing with his parents he had another attack which lasted several hours. He eventually recovered entirely after two weeks of absolute quiet in bed.

Quite severe acidosis, which overshadows all other symptoms, has been encountered in a few cases. The child has the mild respiratory symptoms and signs of influenza and the redened pharynx. A profound toxemia with incessant vomiting abruptly develops. The breath has the odor of acetone and the urine is loaded with acetone and diacetic acid. There are alternating periods of profound stupor and restlessness. The temperature is only slightly elevated and the pulse may be relatively rapid or slow. Constipation is very obstinate. Usually the patient is too acutely ill to complain, but sometimes abdominal pain is complained of by those who can talk. Vomiting continues even though nothing is taken by the mouth, and the constant straining causes blood to appear in the vomitus. Under appropriate treatment for acidosis the toxemia gradually disappears, and in from two to four days the patient is well on the way to recovery.

In a considerable proportion of cases severe acute conjunctivitis lasting for only two or three days, has been observed.

A typical acute follicular tonsillitis coming

on a week after the onset of influenza was seen in one case. This may have been an entirely different infection.

It is practically impossible to make a definite statement as to the mortality of this form of influenza. Some physicians report a few deaths, some none. In any event, in uncomplicated cases, even those exhibiting a severe general toxemia, the disease is self-limited and recovery is the rule.

Nothing of specific value can be said about the treatment. The one precaution which most nearly insures complete recovery and prevents relapse is absolute rest in bed. A good rule is to keep the patient in bed two to four days after the temperature becomes normal, the time factor depending on the severity of the attack. Infants should be kept as quiet as possible and not be subjected to excitement or excessive handling. It is necessary to modify the diet only according to the dictates of the patient's appetite during the acute stage of the illness. Later if the appetite does not improve tinct. nux vomica will greatly help. Overtreatment, employing the use of antipyretics, anodynes, etc., probably does more harm than good. Symptomatic treatment, however, is often advisable. Codeine in small doses in older children may be used to partially relieve the cough and also the abdominal pain. Mustard plasters seem to do good when there is considerable Bronchitis. If the high temperature causes much restlessness or other nervous symptoms, a warm tub bath or sponge is most effective, and if necessary sodium bromide may be given.

As a routine the following treatment has seemed satisfactory.

1. Absolute rest in bed and quiet.
2. A liberal amount of fresh air and water.
3. Laxatives as indicated. Mineral oil for infants. Senna, cascara, castor oil or a saline for older children.
4. Drops consisting of camphor, menthol, and iodine in liquid albolene to be put in the nose every 4 hours.

5. Sodium bicarbonate in doses from 10 to 30 grs. t. i. d.

The treatment of complications follows the usual recognized methods. Digitalis is the one drug of choice in pneumonia and in a myocarditis bordering on auricular fibrillation. Steam inhalations with comp. tinct. benzoin should be used for laryngitis. Syrup of ipecac and calcerin may also be given if breathing becomes alarming.

NOTE: In order to substantiate the personal observations as set forth in this paper, many physicians have been consulted about their recent cases of influenza; and nothing contradictory to a general consensus of opinion has been written. It is probably a fact, however, that the influenza which occurs in different parts of the Country, sporadically or epidemically, may exhibit wide variations in symptomatology, just as epidemics in the same locality vary from time to time in the outstanding manifestations of the disease.

## A CONSIDERATION OF ULCER OF THE STOMACH AND DUODENUM

By *R. L. Gibbon, M. D., F. A. C. S.,*  
*Charlotte, N. C.*

Ulcer of the stomach and duodenum is a frequent disease of the abdomen, in fact is perhaps the most frequent after the appendix and gall bladder. It is a disease which is not common to any age but occurs usually between the twenty-fifth and fortieth years. In men it is more common than in women, in a proportion of about three to one. The cause is infection in the wall of the stomach, brought hither by the blood stream from a primary focus, more commonly in the teeth, tonsils, appendix or gall bladder. In some cases healing of the lesion seems to be spontaneous. In operating for other conditions we have found the scar of a healed ulcer in the stomach. Other cases are benefited by medical treatment and a smaller group, but a very definite group, can be helped only by surgery. In all cases which are complicated, or far advanced, the indication is surgery. Besides progressively destroying and weakening the local area in the involved wall, ulcers produce a very deleterious effect on the functions of the stom-



ach. The secretory activity is greatly altered, which is usually indicated clinically by a very high grade acidity. So likewise is the motor power effected. The stomach will be found to empty itself of contents abnormally. Either there will be delayed emptying with retention of food or a too rapid emptying—more commonly the former is the case. Peptic ulcer will account for a certain proportion of our cases of so called "Chronic Indigestion."

In consideration of the symptomatology of ulcer of the stomach and duodenum what holds good for duodenal ulcer holds equally good for all ulcers situated in the pyloric area of the stomach. The history of duodenal ulcer then may be taken as the type for all ulcers located on both sides of but near the pyloric sphincter.

The clinical features of ulcer of the duodenum have been very completely discussed and clarified by the observations of Moynihan, the English Surgeon, Deaver, Graham, Eustermann and the Mayo's in America. The symptom-complex of ulcer has been found to manifest four characteristic features of great diagnostic significance in the majority of the cases.

First, the Periodicity of attacks is so constant and striking a feature of ulcer of the stomach and duodenum that one cannot but have in mind this lesion when the patient complains of repeated attacks, each covering days, with an intermission of normal health of a varying time. The onset of the symptoms is often initiated without discoverable cause, appearing suddenly and continuing without interruption for days, weeks, or even months, each day a repetition of the former, each meal producing about the same effect; first, ease—later followed by the usual syndrome of pain, or burning distress, gas, sour eructations, and vomiting of sour mouthfuls of varying quantities, all of these being at their worst from two to five hours after a meal.

The second feature of ulcer symptomatology is the Chronicity. The history of the symptoms in these cases covers a period of

many years—not infrequently as many as twenty years. The conclusion must be drawn that the condition first begins in youth but the symptoms do not become serious in most cases until many years later. We have operated on cases of ulcer of the stomach as young as twenty-four years and as old as sixty-two years. During all of these years there are periods when the patient suffers from the symptoms regularly every day. Suddenly all symptoms disappear, and a period of normal health is enjoyed. Such occurrences are rarely seen in gall bladder or appendical dyspepsias. Reflex stomach symptoms from disease in these organs is more commonly continuous, without such clear-cut periods of remission, although the Chronicity may be as evident as in ulcer of the stomach.

Pain is the one great and most constant symptom in gastric ulcer, is perhaps the most characteristic and diagnostic in its manifestations. In a large series of cases it has been found to be absent only in 170. As has been well said "it is not the kind of pain, not the location of the pain, but the time of the pain that is the distinguishing feature." It is the regular, almost clock-like appearance of this pain at the same time every day during an attack that attaches to it such definite diagnostic significance. There is perhaps no other abdominal condition which has so peculiar a way of manifesting its presence. The pain varies from a mild distress to that of great intensity. It is felt in the epigastrium, or right upper abdomen, and is described as a "burning", a "gnawing" or a "boring" sensation. Unless complications have introduced considerable modifications, its appearance, control, and disappearance, are almost if not quite the final evidence required for a correct diagnosis. Patients can often give definite hours for the appearance of the distress, or pain. Usually eleven in the morning, four in the afternoon, and two at night. Always however, the pain appears sometime after meals, oftener it is nearly exact to say before meals. Usually it is from two to five

hours after meals that the burning, gnawing feeling begins.

The last remarkable feature of the symptoms of stomach ulcer is the readiness with which these are controlled during an attack, in uncomplicated cases. These methods of control seem to come to the patient's attention at a very early date. Food control is absolute. A cracker, a biscuit, a glass of milk gives instant relief. Another meal gives relief until the stomach begins to empty. One of our patients carried crackers in his pocket during his golf in the afternoon to be eaten about four o'clock when the pain began. Another, an aviator, always carried crackers to be eaten for relief during the flight. Alkalies gives many patients relief, especially when combined with a little food. Others force vomiting to rid the stomach of the bitter, sour material, which seems to collect and cause the pain.

#### GASTRIC ULCERS OR ULCERS IN THE BODY OF THE STOMACH

In ulcers of the stomach located at some distance from the pylorus, or in the body of the stomach, the symptoms may vary to some extent from those of ulcers about the pylorus. In these cases the same characteristic periodicity is found, also the same symptoms—pain, gas, sour stomach, etc. As a whole, however, the symptoms are not so clear-cut and regular, and from the history alone the diagnosis lacks very much in certainty. The pain comes sooner after meals and does not continue so clearly up to the time of the next meal. The pain may cease for a time to begin again just before the following meal. Sometimes food relieves the pain, though not so often, nor so clearly as the pain in duodenal ulcer. The pain often comes so soon after meals that food seems to cause the pain and the fear of this "food pain" is much more commonly seen than in duodenal ulcer or pyloric ulcer. It is then that we find the patient abstaining from food because of this pain, while the appetite is perfectly good. The

typical hunger pain so characteristic of duodenal ulcer is not often present. As in ulcers near the pylorus, those in the body of the stomach have a very chronic course and last for years. In gastric ulcer the periods of remission, or relief from symptoms, are shorter, and the symptoms more commonly tend to be constant than in duodeno-pyloric ulcer. Gastric ulcer is more common in women than duodenal ulcer, while duodenal ulcer is more common in men than gastric.

Hemorrhage from the stomach occurs in twenty-five per cent of the cases of ulcer. Ulcer is the most common cause of hemorrhage from the stomach. The blood may be immediately vomited or may pass largely in the stools. Blood in the gastric contents in small amounts is more indicative of gastric cancer than ulcer.

In uncomplicated ulcers of the stomach and duodenum, vomiting is almost unknown as a symptom. Moynihan states that the majority of the patients on whom he has operated have never vomited. It is often induced to relieve symptoms.

Throughout the period of symptoms the appetite remains good, however certain foods, principally fruits and acids of all sorts, cannot be tolerated. There is rarely nausea, the weight remains about the same, but the bowels usually manifest a chronic spastic constipation.

Such is the history of uncomplicated ulcers of the stomach. It is in the late cases when such complications as adhesions, hour-glass contractions, obstruction of the pylorus and chronic perforation have occurred that the true picture of ulcer may be obscured. It is in these, however, that a carefully taken history is of such value.

#### COMPLICATIONS OF PEPTIC ULCER

When an ulcer of the stomach or duodenum heals, the contracting scar tissue at the ulcer site often produces a very much crippled and deformed stomach, almost incapable of proper functioning. Obstruction of the pylorus and hour-glass contraction of

the stomach are thus produced, and the patient begins to suffer marked vomiting from stagnation of food, nausea, loss of appetite, loss of strength and weight, with intensification of the pain in the upper right abdomen which is not relieved by food, alkalies, etc. These cases often present the picture of an advanced carcinoma of the stomach, and possibly cannot be differentiated from cancer except at operation. It has recently been our experience that a spasm of the pylorus set up by an ulcer in the stomach may be so intense as to cause obstruction with stagnation of food, and constant vomiting, simulating a real, organic obstruction.

Chronic and incomplete perforations may be the cause of recurrent attacks of acute, colicky pain in the upper abdomen. These attacks may suggest acute gall bladder infection, or acute appendicitis. It is the extension of the infection thru the thinned out wall of the stomach to the peritoneum with a resulting localized peritonitis, which is the pathological foundation for these attacks. When the spread of the infection is slow enough to permit the formation of protective adhesions in advance of the actual perforation, quite an extensive mass may be produced, with or without a secondary cavity. One of the earliest cases of our series was a woman of sixty odd years who suffered upper abdominal pain, nausea, loss of appetite and emaciation. At operation there was a large mass involving and obstructing the pylorus. The size and extent precluded any hope of removal, nor was it possible to determine whether the lesion was cancerous or benign. A posterior-gastro-enterostomy was done merely to prolong life and relieve the suffering. The patient made a good recovery, and today, nine years since the operation, is strong and healthy. This was a case of chronic perforation of a stomach ulcer, benign of course, and cured by the mechanical effect of a gastro-enterostomy. Many surgeons have reported similar experiences, and Deaver remarks that "we must never lose sight of the fact that ab-

sorption and dissipation of the mass is known to take place after simply the performance of a gastro-enterostomy."

Chronic perforation of gastric ulcers may also result in a perigastric abscess with pus formation. We have had two cases of this nature, one recovered and one died. Apparently it is not a common thing.

In some cases the extension of the infection thru the ulcer base to the peritoneum may be more acute, the resulting peritonitis more virulent, the symptoms and the physical signs indicating an acute abdominal emergency. At operation the cases will show a yellow fibrinous exudate scattered over the peritoneum about the ulcer area, numerous omental adhesions, and an ulcer whose base is so thinned out as to threaten immediate actual perforation but in which complete perforation has not occurred. If the omentum, the gall bladder or the pancreas behind, becomes adherent over the frayed-out ulcer crater, the process may subside, further spread of the infection be checked and actual perforation prohibited. Such cases are familiar to most surgeons of experience.

In summarizing the history and clinical features of ulcer of the stomach and duodenum, the majority of the uncomplicated cases can be recognized by the characteristic features of the symptom-group—the periodicity, the chronicity, the orderly and clock-like appearance of the pain, gas, sour stomach, etc., at a certain time, usually two to five hours after a meal, day after day during an attack—each day a repetition of the former; and finally the absolute control of the symptoms by food, alkalies, or stomach irrigation. The pain is always a gnawing, burning distress. Severe acute pain when present is due to a perforative process, or a painful spasm of the pylorus. Remember also, that in the late cases the symptoms of pyloric obstruction, hour-glass contraction, of incomplete and chronic perforation become superimposed and commonly will dominate the picture. It is then that the history of the early symptoms is



so important in reaching the diagnosis. Appendicitis, gall stone colic, and malignancy may be suggested in many of these cases.

#### THE DIAGNOSIS

The diagnosis of gastric and duodenal ulcer is to be arrived at along two lines, and only two. The first step is the obtaining of a carefully elicited history. Too much time and patience cannot be spent in obtaining this. The interpretation and analysis of the symptom-group in the light of what has already been said will often in many cases give the diagnosis. The history should then be checked up with a complete x-ray study by a competent roentgenologist skilled in this field. The collaboration of the information obtained from these two sources is quite sufficient in reaching a diagnosis. Of course other methods of diagnosis may be added, such as gastric analysis, but these are only of a relatively small value. Emphasis should be placed on the skill of the roentgenologist for the proper interpretation of the plates is very essential to obtain the maximum value from the x-ray study.

#### THE SURGICAL TREATMENT

The surgical treatment of peptic ulcer is a field of growing and progressive surgery. Medical literature is replete with reports and plans of treatment. As things stand at present, there is no fixed rule of procedure. There are several methods popularized by various surgeons, but no one is a standard. Gastro-enterostomy, which was once hailed as the ever reliable, and successful method is now receiving less favor as "a cure-all" and is recommended only for given indications or often in conjunction with other methods. Finney's Pyloroplasty is far the better plan in certain cases. Excision of the ulcer with the knife, with or without a gastro-enterostomy, is popular, the Cautery excision, as developed by Balfour, has also certain indications and adherents. In general it is a question of adapting a technique to suit the pathology of the individual case. This requires judgment and experience on

the part of the surgeon. The same operation cannot be done on every case. It is also true that the trend of all recent surgical treatment is to eliminate the ulcer, by excision or destruction with cautery. Of course, in certain instances the ulcer is so located that it cannot be removed, but the rule still stands that in every case when possible the ulcer must be gotten rid of, whether the removal of the ulcer is to be followed by a pyloroplasty, a gastro-enterostomy or not is a question of the indications of the individual case. Gastro-enterostomy alone will cure some cases, and others is the only procedure possible. The method still has ardent adherents as the Mayos and Deaver, in spite of the criticism that it is at present enjoying. Perhaps the best method of treatment today represents a combination, first a complete excision of the ulcer, or destruction by cautery, followed by a gastro-enterostomy. Good results in our own experience, however, have also been gotten with simple excision. We always do a gastro-enterostomy combined with excision of the ulcer wherever possible.

#### THE INDICATIONS FOR SURGICAL TREATMENT

First, in all cases where medical treatment has failed to relieve the symptoms. Second, in all cases of ulcer of the body of the stomach during the cancer age because of the tendency of these ulcers to undergo carcinomatous degeneration. Third, all cases of complicated ulcers, in which cicatricial contraction has occurred or there is a chronic perforative process. It is very improbable that medical treatment can cure the chronic perforative cases with dense adhesions and a secondary cavity. Some of the most brilliant results in surgery are gotten in the cases of cicatricial contraction and obstruction of the stomach when a posterior gastro-enterostomy is done.

There is and there probably always will be a contest between the surgeons and internists as to who cures the most cases of ulcer.

Both have failures and both have successes. My personal opinion is that early cases should be given the benefit of medical treatment for a period of time. But this failing and the symptoms still progressive, the case should be considered surgical. On the other hand in the late cases it is difficult to see how medical treatment can effect the advanced state of pathology present. Ulcers in the body of the stomach after the forty-fifth year should all be excised because of the danger of carcinomatous degeneration.

In conclusion, I would like to emphasize that ulcer of the stomach and duodenum is a relatively common disease, and ought always be thought of as a possibility when a patient complains of a chronic indigestion of many years duration, and is always a possibility with upper right abdominal symptoms.

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### THE PRESENT MODE OF X-RAY TREATMENT OF DEEP SEATED LESIONS

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*By Floyd D. Rodgers, M. D., Columbia,  
S. C.*

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The discovery of the X-Rays was announced to the world in November, 1895 by William Conrad Roentgen, Professor of Physics at the Royal University at Wurtzburg. Almost immediately following this epoch-making discovery the suggestion was made that these Rays might be used for therapeutic purposes. The idea was promptly followed up and soon extremely encouraging results in almost every type of local lesion were reported. From that time until the present there has been a monumental amount of real scientific work done, and today, twenty-eight years after its discovery, the X-Ray is universally recognized as one of the most important weapons in the hands of the medical profession in its increasingly successful war on disease.

From the moment of Roentgen's announcement a progressive and marvelous development has taken place in X-Ray apparatus. In the early Roentgen era an exposure of twenty-five minutes was frequently used to obtain a readable Roentgenogram of the hip. Today, with the new machinery, tubes and accessories it is possible to make a better roentgenogram in a fraction of a second. The development of tubes was unfortunately a slow process and not coequal with that of the exciting apparatus. Because of this fact the therapeutic use of the Rays did not keep pace with their Radiographic application. Finally, the genius of Mr. Coolidge lead the way to a solution of the difficulty, and his tube with its hot cathode, regulating the flow of current, at once increased the usefulness and potentiality of the X-Ray machine many fold. Electric workers in many parts of the world made their contributions and one striking development followed close upon the heels of another; thus the therapeutic worker thought he saw his dreams realized in the perfection of an apparatus suitable to his ambitious needs. But soon new requirements presented themselves and new developments inevitably followed. Because the X-Ray had been found in the hands of competent persons to be one of the best agents known in the treatment of superficial malignancies, operators, with a more powerful apparatus, immediately began a more determined effort to reach deep seated regions. This they endeavored to do by increasing the voltage and reducing the amperage, thereby securing a ray of greater penetrating power destructive to abnormal cell activity. Following these observations came the battle of the filters and we used leather, glass, aluminum, zinc, copper and other metals of varying atomic weight in an effort to equalize the ratio of surface dose to depth dose by increasing the number of filters and moving the target away from the skin, and by simultaneously increasing the length

of exposure we were able to get a fairly satisfactory ratio of skin to depth dose.

Results were tremendously encouraging. We could occasionally cause the disappearance of a tumor mass, and in a great many instances we could reduce or hold at a standstill a hitherto rapidly growing malignant focus. We had not reached our aim, but with the data at hand an effort was made to increase the penetration. Electrical engineers succeeded in building transformers that would give fifteen inches penetration or 200,000 peak volts, and even transformers that would produce 300,000 volts with a penetration of twenty inches. Here again we were faced with the difficulty of producing a tube that would stand the terrific strain of hours of bombardment with 200,000 volts with a low milliamperage without breaking down. This Mr. Collidge promptly and efficiently did by building a giant universal tube that will carry a peak voltage of 200,000 at eight milliamperes, and today this tube with its carrying capacity of 200,000 volts represent the limit that we have been able to attain. If it were possible to build a tube of greater capacity its usefulness would be questionable because of the fact that after the output of 200,000 volts has been passed the curve of penetration shows a perceptible flattening and the voltage has to increase very rapidly to almost impossible proportion to obtain a small increase in penetration. Therefore, the general impression pervading the minds of X-Ray men is that we have a weapon whose capacity will not be materially enlarged nor the speed of its missile increased, but that future improvement will come in the skill and knowledge necessary to its use.

#### INSTRUMENTS FOR MEASURING DOSES.

With the terrific energy of this new apparatus at our disposal one can see the immediate necessity for knowing the exact amount of current that is being delivered

to the patient. We have instruments that will give us indirect measurements; they are the milliomper-meter, the kilovolt-meter, and the sphere gap. The instruments that measure directly are the various types of iontoquinto-meter electroscopes, and intensimeters. These instruments give us the direct reading of the output of the X-Ray tube.

In the application of X-Ray to deep seated lesions there are certain factors that materially limit the dosage; the blood, the age of the patient, irradiation sickness, and last put not least the skin susceptibility.

BLOOD—We know that distinct and well defined changes take place in the blood after intense irradiation. There is a diminution in the number of leucocytes and occasionally an actual destruction of red cells. Therefore, it is of the greatest importance that the blood picture be kept in mind, for if high voltage X-Ray therapy is administered with the white cells below a given count, then there is danger to the patient's life from this mode of treatment.

#### IRRADIATION SICKNESS

There has been a noticeable diminution in the intensity of irradiation sickness since the advent of high voltage therapy, when one port of entry is considered, in comparison with one port of entry at the lower voltage, but the sum total of irradiation sickness is greater when a high voltage is used. There is now and probably will be for a long time a hot discussion as to the cause of irradiation sickness. I will enumerate a few of the causes for example, the inhalation of ionized air, the absorption of toxic material from the intestinal tract when the abdomen has been X-Rayed; the biological change in the blood as a result of irradiation changing the alkali or acid bases in the body fluid. Certain it is that high voltage X-Rays passing through the abdominal area will produce a much graver irradiation sickness than the same dose passing through



other portions of the body, the small intestines and stomach seeming to be particularly susceptible.

#### SKIN.

It is a well known fact that the skin absorbs the rays very rapidly as they pass through on their way to more distant parts, for this reason the integument is far more susceptible to the action of rays than almost any of the underlying structures. Later I will explain some of the methods used to avoid injury to the skin and at the same time permit the delivery of the desired dosage to the deep organs.

The relative susceptibility to rays of the various tissues; roughly, we think that the eye is almost five times more resistant to the ray than are the skin, muscle and fascia. Nerve tissue, (excepting the brain) is very resistant to the ray. Cartilage and bone have a high degree of resistance, the small intestines are highly susceptible and the skin withstands a dose that will result in marked lesions in the mucosa of the small bowel. The suprarenal glands appear to be especially susceptible to the X-Ray and for this reason one gland should be screened when large doses are being given over the adrenal area. Some glandular structures, particularly the parotid, are highly resistant to the ray. The liver and kidneys show more resistance than the skin, and the spleen has an increased susceptibility over that of the skin. Therefore, it is to be seen that knowledge of the comparative degree of susceptibility of the various tissues is very important in the administration of deep X-Ray therapy, and can be used at times to very great advantage.

#### AGE OF PATIENT.

Early youth and extreme age necessarily decrease the resistance of the patient to irradiation.

#### TYPES OF DISEASES TREATED WITH THE X-RAY.

I intend now to take up not the superficial lesions, but rather the deep seated

lesions that may be treated with considerable success with the Roentgen ray. The enumeration of these conditions would include malignant tumors of any organ, fibroid tumors of the uterus, Hodgkin's Disease, (which, of course, includes lympho-carcinoma) persistent and enlarged thymic and thyroid glands.

It is probable that an enlarged and persistent thymus offers one of the most brilliant examples of the efficiency of X-Ray therapy. The results obtained are striking and permanent. It is possible with care, and by using several ports of entry to administer to the thymus 150 per cent of the skin dose, thereby causing a rapid and complete atrophy. However, as the thymus seems to be especially susceptible to the ray, it is not necessary to give huge doses, nor does the penetration need to be very great.

The treatment of Hyperthyroidism has been so successful in the hands of a great many men that this method of treatment is usually tried before operation is resorted to. Dr. E. L. Jenkinson of St. Luke's Hospital in Chicago, Ill., in a recent article in the American Journal of Roentgenology reports a series of three hundred cases treated with X-Ray alone. These cases were checked with Basal metabolism estimations and he says that in his three hundred cases the results were uniformly good with the exception of those in two patients. He had two fatalities in this series of three hundred cases and one patient with a metabolic rate of 150 plus made a complete recovery with no return of symptoms after three years. His conclusions were: "That not all types of goitre are amenable to X-Ray therapy." The colloid, cystic and simple thyroids should not be subjected to irradiation. Each case should be treated as an entity, routine treatment of all cases is unsatisfactory. Frequent metabolic determinations are an indispensable guide in the treatment of Hyperthyroidism. The majority of cases of exophthalmic goitre will respond to X-Ray." The results ob-

tained from X-Rays in Hyperthyroidism are startling and permanent; of course, the X-Ray operator will have failures, but so does the surgeon, his death rate will not be as high as the surgeon's, his recurrence of symptomatology will be a little greater as compared with the surgeon's, but in our experience we have found that the percentage of cases we fail to cure with the X-Ray, and later came to operation, is no greater than the number that had been operated on one or more times and then presented themselves for X-Ray treatment as a relief from their distressing symptoms. I have one case in mind—that of a Baptist minister's wife who had been operated on three times, she came into the hospital with a Basal metabolism of plus 89, pulse 135, and marked exophthalmos, the surgeon refused operation and the woman was referred to us for treatment. She was treated with very happy results. She has gained thirty-five pounds in weight, and the exophthalmos has disappeared. She still has some tachycardia, but this is probably due to permanent degenerative changes in the heart that have taken place during the years of Hyperthyroidism that preceded treatment. The failures of X-Ray and the failures in surgery should not affect our efforts as each method of treatment has a definite field of usefulness.

#### FIBROIDS.

This condition has been treated in several ways with excellent results and some of the methods that have been used are worth enumerating. A German whose name I cannot remember at his time causes a complete disappearance of rather large Fibroids and stops hemorrhage from the uterus by the administration of X-Ray to the hypophysis. A Frenchman has found that he could accomplish the same result by giving irradiation over the spleen. However, the majority of American workers direct their treatment to the uterus and ovaries with very brilliant results. Uterine hemorrhage

can be controlled with startling ease and if the dosage be carefully applied, without more than a temporary sterility.

There are cases on record in which Fibroid tumors of the uterus have been treated with the X-Ray causing their complete disappearance and the patient has had one or more pregnancies following.

#### HODGKIN'S DISEASE.

The glandular enlargements in Hodgkin's Disease can be controlled very easily by direct irradiation of the various enlargements as they occur, keeping close track at all times of the blood picture because the involvement may be so extensive that almost the entire body may receive more or less irradiation. We have a patient under observation at the present time who came to us in March, 1922 with a history of glands on the right side of the neck having been enlarged for one year, and the left side had begun to enlarge about the time he came to consult us. This man has received in all fifteen X-Ray exposures. He is now attending to his work and seems to be in perfect health at this date, twenty months after beginning treatment. We are not too optimistic, however, in the treatment of Hodgkin's Disease, because it is a fact that in many of these cases you can cause every visible or palpable gland to disappear and still the patient goes progressively down hill. I will refer to the case of another patient who came to see us for the first time in May, 1922 with a diagnosis of Lymphocarcinoma or Hodgkin's Disease. He presented a large mass on the right side of his neck with the glands in the supraclavicular region involved. This man received eight treatments with a complete disappearance of glandular enlargements and was in perfect health until the past summer when he developed an acute catarrhal jaundice from which he made a very slow recovery. He returned to us the latter part of June with a pain in his back, and with no X-Ray evidence of metastasis in the spine at that

time. In the early part of September he again returned complaining of pain in the back and we found on the right sides of the third and fourth lumbar vertebra a marked overgrowth of bone which was apparently a metastasis in the spine. This man received deep irradiations over the involved area. He returned three weeks later and one of the pictures being passed around illustrates not only improvement of the condition in his spine, but the rapidity with which this metastasis increased after once having lodged in this part. The last report from this patient is that he is steadily improving.

Right here it might be well to cite one other case report—Mrs. M. M. D., housewife, age 48, consulted us the first of October, 1923. Two years ago her right hip began to give her considerable pain at night, and slowly began to enlarge until at the present the right leg is seven inches greater in circumference than the left. She has lost forty pounds in weight. X-Ray of the hip disclosed carcinoma involving the greater trochanter. A systematic search was instituted to locate the original site of the carcinoma because we know that bone carcinoma is necessarily a result of metastasis from some other location. The only other abnormality noted was a markedly enlarged thyroid gland with very little exophthalmos with pulse rate of 148 with marked fine tremor. This thyroid was distinctly nodular and one or more of the nodules had a "flinty" feel so we assumed that the original carcinomatous lesion was in the thyroid. This left us between the devil and the deep blue sea. Operation on a malignant thyroid would hardly be justifiable if the patient were going to die promptly from a metastatic malignancy in the hip. Operation on the hip was out of the question, so the patient was told before she reached our hands to go home and to make herself comfortable with morphia and await the end. However, feeling that we might be able to accomplish some alleviation of symptoms this woman was given

deep therapy exposures, three ports of entry being used, one anteriorly, one posteriorly, and one laterally; in this manner taking advantage of cross fire methods. We figure that we delivered one hundred and fifty per cent of an erythema dose into the tumor. Three weeks later a radiograph was made that showed a distinct deposit of new bone throughout the area involved so we feel that the probabilities are in favor of controlling the malignancy in the trochanter. The thyroid has received irradiation and the pulse rate is down to 120. The patient has gained in weight, in fact, there is a decided general improvement noted up to date.

Probably no other disease presents to the physician such a hopeless outlook as carcinoma of the cervix for the patient comes for treatment after the disease has been well established notwithstanding all the efforts that the medical profession is making to instill into the mind of the lay public the necessity for early diagnosis and prompt treatment if a cure of carcinoma of the cervix is to be expected.

Nature blundered in not making carcinoma an extremely painful disease analogous to that of a decayed tooth. When the patient arrives the diagnosis is usually very easy to make. The only perplexing problem is whether or not this patient is operable. It has been our experience that there is not much difficulty in determining this question. Unless the patient is moribund or the disease involve the rectum or the bladder or a considerable area of the vaginal mucosa, the case is considered operable. With this condition of affairs we have found it expedient to give the following advice to all of our patients:

First, that they should have radium exposures in the cervix. We use fifty milligrams of radium filtered through one millimeter of brass and two millimeters of rubber, the capsule being introduced into the cervix. The patient is given varying doses from three to six thousands milligram hours, and deep X-Ray therapy is then instituted.



A wait of from twelve to twenty-one days, then a pan-hysterectomy which is followed by the further administration of deep X-Ray therapy. Our rays are applied to one port of entry in front and two ports posteriorly through each gluteal muscle, because by using these two ports the trajectory of our ray is through the thinnest portion of the pelvic girdle. In using this method we find that the patients come to operation with almost a total absence of the cervix, no hemorrhage and almost a complete disappearance of the odor. They have usually gained in weight, and are comfortable. We feel that this preliminary treatment has many advantages over the cautery. Our records would make it appear that the interval before recurrence is lengthened and we believe that in certain cases operation alone would not prove curative when as a matter of fact those patients are well and happy three years after such procedure, although our X-Ray treatment was given with a transformer that was only capable of producing 141,000 peak volts.

We have under observation at the present time Mrs. J. J. H., who consulted us June 26, 1922 for a cervical carcinoma which presented an ulcerating mass in the vagina the size of a man's fist, she weighed less than 100 pounds, was bleeding profusely, with considerable pain in the rectum, and some vesical disturbance. We considered this case as an inoperable carcinoma of the cervix, but realizing that carcinoma of the cervix is not considered by most surgeons inoperable unless the abdomen has been opened and the uterus and appendages removed, I advised the procedure outlined above. This patient received 4,500 milligram hours of radium and one exposure of X-Ray over the abdomen. She improved very rapidly and when her period of wait was over and she was advised to be operated upon as per previous arrangements, she walked out of the hospital and we heard no more from her until fourteen months later. At this time she reappeared stating that she had been entirely well, but troubled consid-

erably with constipation and some pain in the back. Vaginal examination showed entire absence of the cervix, the cervical canal was identified as a dimple in the vaginal vault, one inch to its right there was a small ulcer approximately one-fourth inch in diameter, and one-sixteenth inch deep. The uterus could be palpated, was freely moveable and of about normal size. The woman had not bled from the uterus since we had seen her and she had gained probably twenty-five pounds in weight. Vesical symptoms had disappeared and no mass could be palpated in the rectum. Stool examination was negative for blood. This patient was subjected to intensive high voltage X-Ray treatment.

This was one and one-half months ago, and the patient has failed to report for observation as requested. However, in her case I believe that she has received more benefit from irradiation with radium and X-Ray than she would have from surgery alone. We are not disposed at this time to alter our advice as to the handling of carcinoma of the cervix,—namely, irradiation, operation and irradiation, but we do believe that in a case where there is a question as to operability, irradiation alone will prove just as beneficial and considerably less mutilating to the patient than surgery alone or surgery and irradiation combined.

Carcinoma of the breast is a more serious condition than carcinoma of the uterus. While it is true that the patient with the carcinomatous breast usually consults the physician earlier, the end of that patient is almost always the same. Take a case early before it is possible to make a clinical diagnosis of carcinoma and do a radical operation with irradiation before and after and your patient may live out her normal expectancy. Given a well developed carcinoma of the breast, irradiation, operation and irradiation have a tendency to put off the inevitable. But we have serious doubt if we can cure carcinoma of the breast even though we use every method known to medicine. Recently two cases came to us with nodules in the

breast the size of an egg. The clinical diagnosis in each case was that of carcinoma. The growths disappeared rapidly under deep therapy. X-Ray examination of the chest showed no metastasis to the lungs and these people are apparently cured. Notwithstanding the apparent cure in these two cases we have advised the removal of the breast because certainly there is existing in that breast today the same causative factor that was there before these tumors were found, therefore, we feel that we are justified in assuming that these patients need the exciting cause, i. e., the breast, removed. However, they refused, but are reporting every three months for observation and are highly delighted that they are well and feel that they will probably remain so. We are not so optimistic. We have seen several patients who after operation developed nodules in the supra-clavicular space and in the axilla and in the chest, show a marked improvement after irradiation. We have had absorption of fluid in the chest and lessening of the mediastinal shadows and the complete disappearance of glands take place and the patients take on a new lease of life, but invariably they die from carcinoma. On the whole we believe that all remedial agencies are more successful when directed to carcinoma of the cervix and to the body of the uterus than when directed to the malignant breast. We believe further that the possibilities for real accomplishment are greater than ever before, but the battle is not one of machines; it is one of machines plus intelligence, experience and that indefinable thing call judgment. The new high voltage apparatus merely represents the logical development of the older system of X-Ray therapy, but because of its greater efficiency and great promise it should be considered as a new therapeutic instrument. We do not belong to the class of wild enthusiasts who are almost obnoxious in their as-

sertions of its supernatural powers, but it does appeal to us as a valuable addition to the various agents used in the treatment of the most malignant disease to which the human being is heir. It is in no way to be considered as the replacement of any agent or method at present felt to be useful in the unceasing warfare on malignant disease.

Just as the invention of the knife did not create surgeons, nor the invention of the cystoscope create cystoscopists, or did the possession of the stethoscope make a clinician, the perfection of high voltage X-Ray apparatus does not imply that its possession makes a roentgenologist. With this weapon in the hands of intelligent men and used judiciously, the near future probably holds the answer to some very perplexing questions.

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## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

MacKenzie, David W.: Haematuria—Its Significance.

(A Brief Clinical Study of 821 Consecutive Cases From The Department of Urology, Royal Victoria Hospital). The Canadian Medical Association Journal, January 1924, Vol. 14, page 41.

The brief report by Dr. MacKenzie is very impressive and well emphasizes the importance of making a diagnosis in all cases of haematuria as early as possible. Dr. MacKenzie writes as follows: "The presence of macroscopical blood in the urine can be due to a great variety of causes, and generally signifies some serious pathological condition of the urinary tract. It is not a clinical entity which requires treatment, but a symptom which demands investigation.

The importance of haematuria and the necessity of determining its cause must be recognized by every physician and should be carefully impressed on each patient suffering from urinary haemorrhage. Notwithstanding all that has been said and written on this subject, there is still a tendency for the medical profession to regard this condition lightly, to treat it without diagnosis, and to consider a cessation of bleeding as an indication of cure. This is largely due to the fact that haematuria is usually intermittent in character. During the free interval, while the patient is apparently in perfect health, it is not surprising that both patient and physician should minimize the importance of this danger signal. It is at this time, while there is yet a probability of cure, that the best opportunity for investigation and diagnosis is afforded.

Haematuria nearly always means the presence of organic disease of the urinary tract. This has already been emphasized

by Kretschmer with 238 cases and by many others. It is again to impress this fact on all of us more directly that I have taken up the study of 3,800 consecutive admissions to our department, at the Royal Victoria Hospital. Of these cases 821 came in complaining of haematuria; this number does not include cases where microscopical blood was found at examination, but only those in which the patient complained at some time or other of having passed blood in the urine. The list given below gives in tabulated form the number of cases, suffering from the definite condition specified, which showed the existence of blood in the urine; but it must be observed that all patients suffering from such conditions do not give evidence of blood. The number evidencing blood in each condition herein set is relatively small. This is more especially true of injuries of the kidneys, renal tuberculosis, infections of the renal pelves, ureteral stones, bladder stones, growths, etc. The following is a classification of the 821 haematurias in 3,800 admissions to the Department of Urology:

### Kidney:

1.—Trauma .....	11
2.—Acute Nephritis .....	7
3.—Chronic Nephritis .....	16
4.—Tuberculosis .....	88
5.—Pyelitis	
Pyelonephritis .....	
Pyonephrosis .....	132
6.—Foreign Body (calculus) .....	64
7.—New Growth (malignant) .....	12
8.—Congenital .....	11
Horseshoe Kidney .....	3
Double Pelves (infected) .....	8
9.—Cystic .....	3



*Ureter:*

- 1.—Foreign Body (calculus) ----- 87
- 2.—Inflammation (stricture) ----- 1
- 3.—Congenital
  - Double ureter with calculus and infection ----- 2

*Bladder:*

- 1.—Trauma ----- 6
- 2.—Acute and chronic inflammation ----- 38
- 3.—Diverticula ----- 4
- 4.—Foreign Body (calculus) ----- 39
- 5.—New Growth
  - Malignant and Benign ----- 87

*Prostate:*

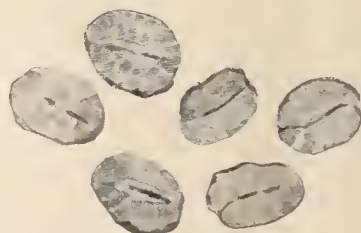
- 1.—Acute Inflammation ----- 10
- 2.—Chronic Inflammation with Tuberculosis ----- 39
- 3.—Foreign Body ----- 2
- 4.—Prostatism ----- 54
- 5.—New Growth, Malignant ----- 14

*Urethra:*

- 1.—Trauma ----- 13
- 2.—Acute Inflammation ----- 11
- 3.—Chronic Inflammation ----- 15
- 4.—Stricture of urethra ----- 10
- 5.—Foreign Body ----- 1
- 6.—New Growth, Benign (caruncles) ----- 10
- Unclassified as to Etiology --- 34

An analysis of these 821 cases shows that 192 were due to calculi, 113 to tumors, 88 to renal tuberculosis, and 143 to surgical infections of the ureters and kidneys, or, excluding the urethra, 536 cases out of 761, that is over seventy per cent were caused by calculi, tuberculosis, cancer or surgical

lesions of the kidney; while the other thirty per cent most certainly required investigation. The great importance of subjecting these patients to a careful and thorough examination is at once apparent. With the present day methods of diagnosis, the origin and cause of urinary haemorrhage can be ascertained in a very large percentage of cases. The findings given in the preceding table, cannot fail to impress us with the fact that red blood cells have no place in the normal urine, and that they are caused by some pathological condition which it is our duty to discover.



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## SURGERY

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### A CONSIDERATION OF LESIONS OF COLON TREATED SURGICALLY

E. STARR JUDD

Though the colon is important physiologically, yet any portion of it may be removed without serious consequence to the patient, provided he or she gets safely through the operation.

He classifies its lesions into four groups, 1—congenital deformities, 2—inflammatory lesions, 3—benign tumors, and 4—malignant tumors.

**Congenital deformities:** The most striking example is dilatation, Hirschsprungs Disease, due to changes in the intestinal wall or to deficient innervation. Constipation is marked as the disease progresses. Laxatives give poor results. Colonic irrigation gives better results. Once in a while the colon empties itself of material which has been accumulating for weeks or months. There is no satisfactory treatment.

**Inflammatory lesions:** Chronic ulcerative colitis is a chronic inflammatory lesion of unknown origin. There are all grades from a reddened bleeding mucus membrane to definite ulceration. This condition begins in the lower colon and extends upward. Two characteristics are thickened colonic walls and smooth mucus membranes. The folds disappear. This later reduces the lumen.

Clinically, the thing manifests itself by frequent stools and blood. Later these in turn cause marked emaciation, great weakness, and profound anemia.

These cases stand operation poorly. Permanent ileostomy affords them the best chance of improvement.

**Tuberculosis:** Affects the right colon more frequently than any other portion of

the gastro-intestinal tract. May be localized or may extend up the colon. Not infrequently causes marked thickening of the walls. Resection affords the best end results.

**Diverticulitis:** Most common in the sigmoid. Usually in obese persons. Many people have it and suffer but little, if any. Often times the diverticulum perforates and an abscess results. This may ulcerate into the bladder.

To operate on acute diverticulitis is hazardous, because of the presence of pathogenic bacteria. Judd advises colostomy above the lesion with protracted drainage prior to resection. This minimizes danger of post operative peritonitis.

**Benign Tumors:** rather infrequent. Polyp more common in sigmoid. They tend to bleed. After opening the abdomen they are rather easily palpable in the bowel lumen. Open the bowel wall and remove the polypus is the treatment of choice. They are often diagnosed by X-ray, or Procto or Sigmoidoscope.

**Malignant Tumors:** Cancer is more common in the rectum and next most frequent in the right colon, region of the cecum or a little higher. When here it produces a profound anemia rather early. The best results follow its very early recognition. Leakage along the suture line often occurs because of vascular insufficiency, e. g. vascular necrosis. Especially is this true in the left abdomen. Every left sided resection operation should be drained. Many of these cases, however, do better with a two or three stage operation. On the right side, a one stage resection frequently suffices, but also do ileostomy to carry away the gases, and lessen tension on the suture line.

## SOCIETY REPORTS

### GREENVILLE.

WHEREAS: God in his infinite wisdom has seen fit to cut down in the prime of his professional life Dr. William P. Cornell, a man who represented the highest type of manhood, a careful, kind and sympathetic physician, an earnest student of medicine and of human nature, a capable teacher, and a warm and sincere friend;

AND WHEREAS: In his death, South Carolina medicine has lost one of her finest sons, and organized medicine, one of her most ardent workers;

AND WHEREAS: Greenville County Medical Society feels deeply this loss, Dr. Cornell having been a teacher of many of the members, and personal friend of these and of others, and an occasional interesting and instructive visitor to our City and to our meetings;

THEREFORE: BE IT RESOLVED by the Greenville County Medical Society, in regular meeting assembled on this third day of March, 1924, that this society is grieved by the death of Dr. Cornell, and that it pay, honor to his memory;

BE IT FURTHER RESOLVED. That the Society extend its deepest sympathy to the bereaved family, sending to Mrs. Cornell, a copy of these resolutions,

BE IT FURTHER RESOLVED: That these resolutions be spread upon the record of proceedings of this Society, and a copy be sent to the Journal of The South Carolina Medical Society for publication, and finally that a copy be sent to the secretary of the Richland County Medical Society.

J. D. Guess.

S. G. Glover.

W. C. Black.

Committee.



## Correspondence

Richmond Va.

March 17, 1924,

Editor,  
Journal of the South Carolina Medical Association.  
Dear Sir:

In the issue of the Journal of the South Carolina Medical Association for February, 1924, Dr. Carl B. Epps, of Sumter, has a very interesting article on "The Present Status of Gastro-Enterostomy." On pages 37-38 he refers to an explanation I have made for the well known satisfactory results of gastro-enterostomy following stenosis of the pylorus, as follows: "Horsley says that the best results follow gastro-enterostomies performed for complete pyloric stenosis, where the alkalinity of the duodenal contents cannot be lowered by the passage of acid gastric contents through the pylorus. Therefore, the unreduced alkalinity of the duodenal contents can better protect the jejunal mucosa at the gastro-enterostomy opening than if this alkalinity had been reduced by the passage of the gastric juice through the pylorus."

Dr. Epps criticizes this explanation by saying, "The alkalinity of the duodenal contents would be just as much reduced by the acid stomach contents when they come together at the gastro-enterostomy opening as they would be if the mixing took place in the duodenum." He also states that "the acid gastric secretion would do the jejunum more harm to be discharged directly into it than to first be partially neutralized by passage through the duodenum."

I believe Dr. Epp's criticisms are not well founded. First, we must remember that the upper part of the duodenum is the normal mixing chamber for acid and alkaline contents, and consequently it is to some extent immune to the acid of the stomach; that this immunity is not universal is well illustrated by the occasional appearance of peptic ulcers in this region. However, further down in the small intestinal tract in the upper jejunum the intolerance to acid seems to be greater than in the upper duodenum. Acid would be more likely to produce irritation in the jejunum where normally only alkaline contents existed, than in the upper portion of the duodenum where there are alternate waves of alkaline and acid liquids, depending upon the amount and the acidity of the gastric juice emitted through the pylorus and the amount and alkalinity of the duodenal contents with which the gastric juice comes in contact.

The statement that the acid gastric juice would be less harmful when it is neutralized by the duodenal contents than if it came directly through the gastro-enterostomy stoma, is entirely correct, but it does come in both ways and the acid gastric juice passing through the pylorus ceases to be either acid or gastric juice after it is mixed with



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a large amount of duodenal contents, and its bad effect is not the direct effect of the acid, but the lowering of the alkalinity of the duodenal contents which is thus unable to protect the jejunal mucosa at the stoma of the gastro-enterostomy from the acid that gains exit here. It must be recalled that the process is largely biologic and that the stoma of the gastro-enterostomy, no matter how large or well placed, does not drain all of the stomach contents if the pylorus is open and unobstructed.

As Carlson has demonstrated, gastric juice is secreted to some extent at all times, though in an empty stomach the secretion is small. The area of jejunal mucosa around the margin of the gastro-enterostomy opening is not very large. If this small area of jejunal mucosa is constantly bathed in duodenal contents of high alkalinity, it seems much more probable that it will be protected from the acidity of the gastric juice when the stomach is empty and when consequently but a very small amount of gastric juice is secreted. As the area of exposed jejunal mucosa is small, the question of volume of gastric juice is not involved to such an extent as if the area were larger, and the constant protection by a high alkaline duodenal content, even though the contents may be in

quantity only sufficient to bathe this area, would be much more effective than a weak alkaline content of larger volume, because only a small amount can come in contact with the small area of jejunal mucosa around the stoma. On the other hand, with highly acid gastric juice only a few drops would be necessary to cover the adjoining surface of the jejunal mucosa, and if this mucosa is bathed with weak alkaline duodenal contents the protection would be comparatively slight. In other words, on account of the mechanical and biologic conditions involved, it is not so much a question of the relative quantity of duodenal contents and gastric contents, but as the area involved is small and only a small amount of either duodenal contents or gastric juice can come in contact with it, it is a question of relative alkalinity or acidity of the fluid that bathes the adjacent mucosa of the jejunum.

I am writing this letter because I have heard other similar criticisms, and because I believe a careful consideration of these facts will substantiate the explanation that I have given.

Respectfully,  
J. Shelton Horsley.

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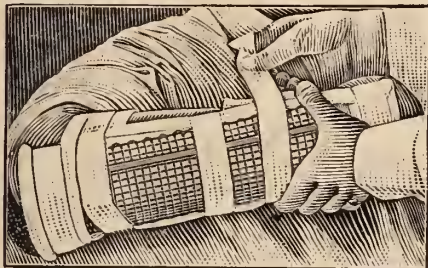
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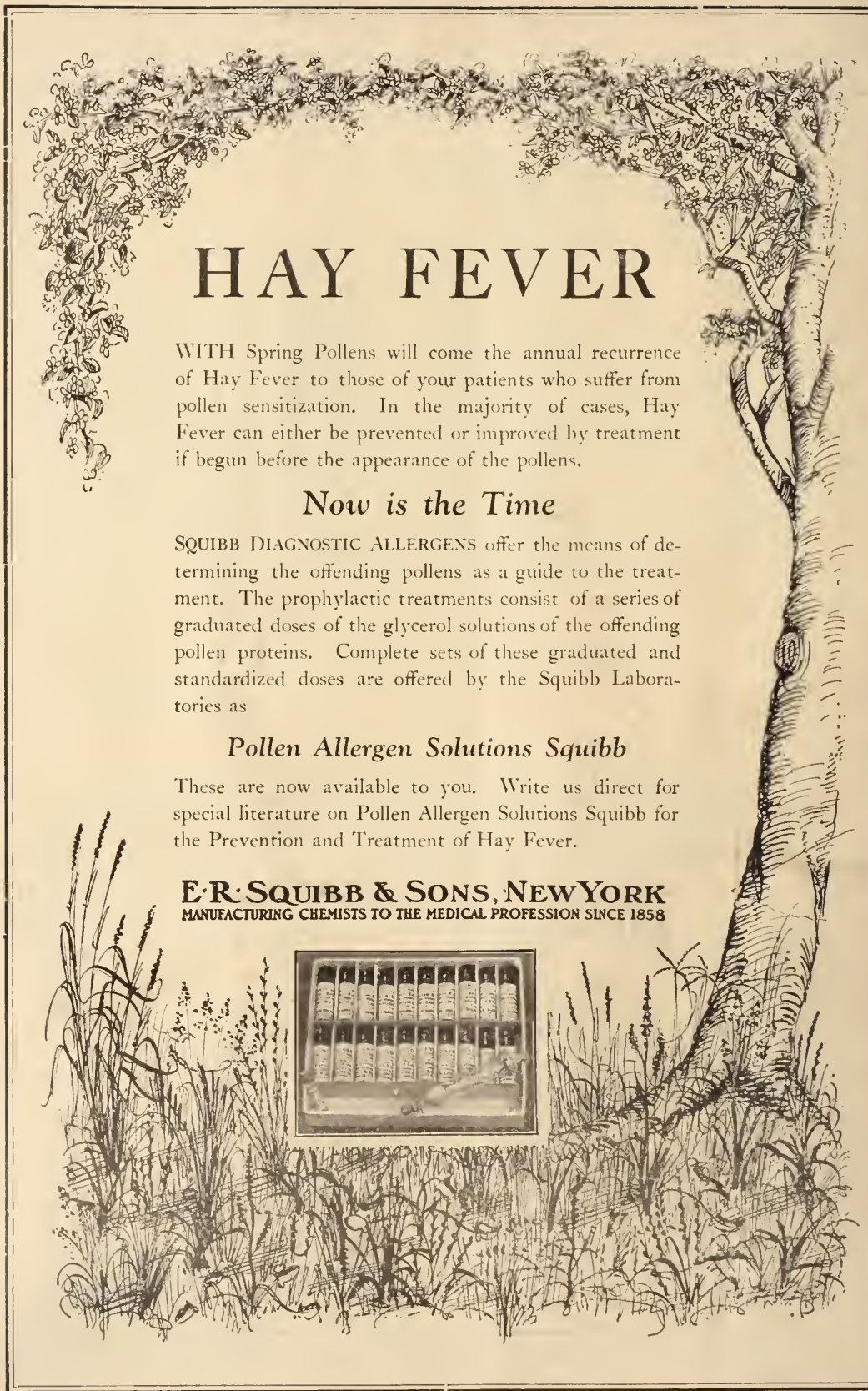
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# The Journal OF THE South Carolina Medical Association

VOL. XX.

GREENVILLE. S. C., APRIL, 1924

NO. 4

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THE JOURNAL OF THE SOUTH CAROLINA MEDICAL ASSOCIATION, APRIL ISSUE

MEAD JOHNSON & COMPANY



EVANSVILLE, INDIANA

# The Journal

## OF THE

# South Carolina Medical Association

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## EDITORIAL

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### ORANGEBURG MEETING A WONDERFUL SUCCESS

The Orangeburg meeting of the South Carolina Medical Association will go down in history as being the most all around successful meeting within our knowledge.

The attendance which of course includes the allied organizations meeting at the same time and place approximated four hundred. Nearly fifty per cent of the members of the State Association were present at some time or other. We believe no State in the Union has a better record than this. The entire proceedings of the House of Delegates was marked by conservative action, no radical legislation being premitted. The reports of the various committees showed con-

structive progress throughout the State. The reports of the officers disclosed the greater progress of all of the activities undertaken by the State Association over any other year. The election of Dr. D. M. Crosson of Leesville will be acknowledged by the medical profession of South Carolina as an honor worthily bestowed.

Dr. Crosson as a member of the State Senate for nearly twenty years has labored in season and out of season to maintain the dignity and honor of the medical profession.

The genuine hospitality of the profession and the citizens of Orangeburg has rarely been equaled and we believe never surpassed. The perfect organization of all of the committees in charge of the arrangements was indeed a delight to the visitor. The enter-

tainments were few, but of the highest order, especially the entertainment in honor of President L. O. Mauldin on Wednesday evening.

For the first time we are enabled to publish a brief resume of the minutes of the House of Delegates immediately following the meeting, in order that the members who were unable to attend may familiarize themselves with the legislation enacted.

We are pleased also to publish in this issue the admirable address on a timely subject of the retiring President, Dr. L. O. Mauldin of Greenville.

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### THE MEDICAL RESERVE CORPS

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We publish in this issue the communication received from the Surgeon General's office in regard to further information about the Medical Reserve Corps. We would also call to the attention of the members of the Association the admirable paper read at the recent meeting of the South Carolina Medical Association by Major Grant. The Military Committee stands ready to be of any service within its power to the members of the Association who are considering applying for commission.

#### WAR DEPARTMENT

Office of the Surgeon General

Washington.

April 9, 1924.

Dr. E. A. Hines, Secretary,  
Military Committee, South Carolina Medical Assn.

Seneca, S. C.

My Dear Doctor:

The Surgeon General desires that the attention of your Association be invited to the need which still exists in developing a Reserve adequate to provide medical service under the Six Field Army Plan.

It is, of course, understood that members of the medical profession will respond promptly to the call of the country should a national emergency develop which will require their service. As the Surgeon Gen-

eral has endeavored to convey to the medical profession, enrollment in time of peace makes possible orderly organization of the Reserve Corps which assures harmony to the personnel and efficiency to the organization.

If you find it consistent and convenient to do so, will you urge upon the members of the constituents of your Association their prompt enrollment in the Reserve Corps? Should you desire further information in this matter, it will be our pleasure to provide it. It is possible that you may consider it more convenient to have at your disposal application blanks for the Reserve Corps which it will also be our pleasure to provide if you indicate a desire for them.

Among some of the members of the profession, now officers of the Reserve Corps, there appears to be a misunderstanding of the promotion policy of the War Department. This policy, a copy of which was sent you, states that members of the Reserve Corps are eligible for promotion to the next higher grade after each five-year period. It is possible that the members of the Reserve Corps interpret this as granting them automatic promotion. This is not the fact. The promotion will be granted in every case, but must also in every case be preceded by an application initiated by the Reserve officer indicating his desire for promotion to the next higher grade. These applications for promotion should be submitted to the Commanding General of the Corps Area in which the officer resides at least sixty (60) days prior to the expiration of his present appointment.

The Surgeon General directs that I express to the members of your committee, and through you to the membership of your Association, his appreciation of the interest and support which they are giving to the Medical Program for the National Defense.

Very truly yours,

G. I. Jones,

Major Medical Corps.



## ORIGINAL ARTICLES

### THE CASE FOR AND AGAINST COFFEE

*By George M. Niles, M. D., Atlanta, Ga.*

Among the cups that cheer but not inebriate, coffee holds a favorite place, so that the question as to its beneficent or harmful effects on various individuals is constantly coming up.

Scare-head advertisements in the popular periodicals, exploiting coffee substitutes, would lead us to believe that it is an insidious poison, sapping both strength and intellect; while the purveyors of some of the prominent brands of coffee would convince us that it is the original ambrosial nectar, once so much in vogue on Mount Olympus, possessing most of the attributes of the elixir of youth.

Having studied this subject earnestly, and having had a fair experience in the dietetics of coffee, the writer will endeavor in this article to extract from the maze of contradictory statements (which, by the way are not all in the popular prints) a scientific view-point of this almost universally esteemed beverage.

#### HISTORICAL AND GEOGRAPHICAL

Coffee was not known to the Greeks or Romans, but in Abyssinia and Ethiopia it has been used from time immemorial. In Arabia it was certainly in use in the fifteenth century, and by the sixteenth century, it was generally drunk over the rest of the east.

Leonard Rauwolf, a German physician, was probably the first to make coffee known in Europe, by the account of his travels printed in 1573. Soon after its introduction, coffee-houses arose almost everywhere, and for about a century these houses were popular resorts, equalling in patronage our present day clubs and cafes.

Like cotton, coffee thrives best under rather limited conditions, needing a moist atmosphere and an equable temperature, approximating sixty to seventy degrees the year around. It has been found, however, that with care, its geographical distribution can be considerably increased, and it is now grown for market in nearly all of the tropical and semi-tropical latitudes, as well as in some of the temperate.

The coffee drunk in the United States is mainly imported from South and Central America, Mexico, and Java, 63 per cent coming from Brazil.

#### COMPOSITION

Coffee consists of the berries or seeds of the *Coffea arabica*, which are dried, roasted, ground, and subjected to infusion. The ingredients are water, fat, crude fiber, ash, caffeine, albuminoids and other nitrogenous matter, sugar, gum, and dextrin.

The exhilarating and stimulating effects are caused by the caffeine and caffeic acid, and a volatile oil developed during roasting. Caffeine is chemically identical with thein of tea, possessing the same physiological properties.

The coffee berry contains no starch, its principal carbohydrate being cane sugar. It also contains a little aromatic oil, made active by roasting, which is slightly stimulating to the nervous system.

#### PHYSIOLOGICAL ACTION

In its physiological action we may confine the discussion to caffeine, as that ingredient exerts practically the whole effect.

On the circulation its action is somewhat antagonistic, for, while it tends to increase the rate of the heart by acting directly on the heart muscle, it tends to decrease it by stimulating the inhibitory center in the medulla. It also, to some extent, dilates the peripheral vessels, which accounts for the feeling of surface warmth following its in-

gestion. The combined effect is to somewhat increase the rate of the heart, and also slightly the output of blood per unit of time.

On the nervous system caffeine is a powerful cerebro-spinal stimulant. Even small doses increase mental activity, quicken perception, induce wakefulness, and lessen fatigue. Toxic doses heighten reflex excitability, and may be followed by tetanic convulsions.

Small amounts of caffeine increase the irritability and working power of all forms of muscle, and, judiciously used aid the muscular efficiency.

The respiratory center is highly stimulated by caffeine, both the number and depth of respiration being increased by its administration.

On the kidneys the effect is marked, the diuretic action being shown more in the increase of water than solids, lowering the specific gravity of the urine. This is a point worth noting by life insurance examiners. Caffeine diuresis is probably due to a direct stimulation of the renal epithelium, though some pharmacologists ascribe it to a dilatation of the renal arterioles.

On the gastric mucous membrane caffeine has but little effect, but the beverage coffee seems to stimulate the oxyntic cells, and increase the secretion of hydrochloric acid. It also seems to stimulate to a certain extent the peristalsis of the intestines.

#### ELIMINATION

Caffeine is mostly eliminated as di- and mono-methylxanthins. But little is oxidized to urea.

#### PSYCHIC EFFECTS

Up to a certain degree it heightens mental perceptions, clarifies foggy brains, wards off drowsiness, and inhibits Nature's danger signal, fatigue. Pushed too far there is a feeling of extreme "nervousness", dread of impending danger, and confusion of ideas.

The methods of preparing the beverage coffee are almost numberless, varying with individual and local ideas and customs;

while the appliances used run from the simplest and cheapest vessels to complicated and costly outfits. To describe even a small number of these methods would lead too far afield, and will not be attempted.

#### PROPER USE

For those who are temperamentally unstable, or whose nerves are "set on a hair trigger", coffee has *no* proper use. It is a *drug* no matter under what flag it sails, and it tends to induce a drug habit just as any other stimulant.

On those of an equable poise, and whose digestion is not awry, it acts as a mild gastric and cerebral stimulant, cheering both the stomach and brain. On many people, when drunk early in the morning it has a distinctly laxative effect, thus helping to clear away the ashes of combustion, and the debris of metabolism.

Strong coffee, either alone or with a little lemon juice is often useful in overcoming a malarial chill, or a paroxysm of asthma. It is frequently serviceable in migraine, while the headaches from fatigue, or the dizziness accompanying "the morning after" quickly disappears after drinking a well-brewed cup.

In low delirium, or when the respiratory centers are blunted by opium poisoning, strong black coffee is helpful in averting that drowsiness, which would soon merge into coma.

In emergencies it may be injected into the rectum, as well as taken by the mouth.

In alcohol intoxication also it tends to clear a befuddled brain, and lend steadiness to wobbly knees; while in a shock from hemorrhage or otherwise it ranks highly as a therapeutic agent.

The food value of coffee alone is very slight, but by its flavor, and the fondness generally existing for its taste, many nutritious articles can be combined with it to advantage.

To those who object to the taste of milk, the addition of even a small amount of coffee will sometimes make it palatable, and it will acceptably flavor many kinds of foods

for invalids, such as jellies, custards, ice cream, etc.

The "morning coffee," a tiny cup of the beverage, served black, with or without sugar, and drunk in bed just before arising, seems to brush away the cobwebs from a sleepy brain, and helps to start the day's activities with snap and vigor.

This custom, which is principally confined to Louisiana, is a most pleasing one, and seems in no way harmful.

Speaking generally, a small amount of not-too-strong coffee, drunk in the morning, or the middle of the day, exerts no ill affects on a healthy body or a normally-strung nervous system; on the contrary, it may help to "knit up the ravelled sleeve of care" and often, after a specially comforting draft, we acknowledge that gratitude for the delicious potation almost like old Omar Khayyam, when he sang to wine:

"Come, my beloved, drink with me the cup that clears

The day of past regrets and future fears."

#### HARMFUL EFFECTS.

Strong black coffee, taken after a full meal, somewhat retards the digestive process, and should be avoided by dyspeptics, especially those accustomed to use strong condiments to wake up an already tired stomach.

As coffee wards off some mental languor, and drives away sleepiness from those whose duties require intellectual concentration or night work, it is easy to form a coffee habit, which, yielded to, may lead into muscular tremors, palpitation, a feeling of precordial oppression, tinnitus, aurium, hyperesthesia, muscular lassitude, vertigo, heart-burn, vague symptoms of indigestion, constipation, and pronounced insomnia.

These symptoms usually subside quickly on discontinuance of coffee, though persons of a nervous temperament, or frail physique may require a long time for recovery.

That excess in its use interferes with general nutrition has been well proved, for a number of years ago Shultz found that under certain conditions when albuminous digestion was ninety-four per cent, upon the addition of coffee it was reduced to sixty-four per cent.

It is certain that coffee is suited to no class of dyspeptics, unless very dilute and in extremely small quantities. It may be further stated that in no disorder of the stomach is coffee actually indicated.

On growing children, particularly those at school, it exerts a baneful effect, both by interfering with nutrition, and by whipping up an already sensitive and rapidly-developing nervous system. The resilience of youth is sufficient unto itself, needing no adventitious aid.

Not infrequently these night terrors in children can be traced directly to coffee.

Among other occasional ill effects may be mentioned pruritus, bradycardia, an irregular heart action, and an appetite for bizarre articles of food.

Idiosyncrasy must be taken into account with coffee, as with any other drug, for we well know what may be detrimental to one does not necessarily harm another.

The foregoing attempts to cover the subject fairly. Coffee has its good points, its limitations, its marked abuses, and while some of the conclusions embodied herein may meet with dissent, they are based on both experience and the opinions of some of the most thoughtful students of the present day, and the writer believes they are worthy of consideration.



## OUR OBLIGATION AS PHYSICIAN AND CITIZEN

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*By David N. W. Grant, Major, M. C.,  
U. S. A.*

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During the one hundred and fifty years of our existence as a nation, we have rapidly grown in the development of our wonderful resources from a few settlements along the Coast to the first place among the nations. We have advanced in wealth and in the arts and sciences quite regardless of the vicissitudes of political strife, or the complications of our international relations. During this one hundred and fifty years our Army has been engaged in one important undertaking every year and a half, and has been called in a major war every twenty years during that period. Meanwhile our people have gone along paying at regular periods with blood and treasure the price of ignoring the plain and obvious lessons of history. No one can say that wars in the future will be less frequent.

It has been the practice of the United States upon the outbreak of war to expand a small professional peace establishment into a great non-professional War Army. These expansions have always been effected without any perpetuity of doctrine or organization, through which the experience generated in one expansion could be utilized in the next. Or to put it in another way, at certain crises in our history with a vast expenditure of treasure and human energy we have erected a great war organization and then have demolished that organization after the emergency without any provision for making that expenditure a permanent National investment. After being forced to militarize a whole generation, we have taken no precaution to make the sacrifices of that generation a heritage of experience for the next generation that may be called upon to bear the stress of war. It is primarily the

object of our new defense law to perpetuate the framework of the organization developed in the World War, so that its tremendous cost can be funded as a permanent investment for all time.

The National Defense Act of June 4th, 1920, provides for the organization of The Army of the United States, consisting of a small Regular Volunteer Army, kept in a highly efficient state, and ready for any emergency at all times, this to be backed by a second line of defense in the form of a volunteer trained force called the National Guard; and finally, both of these forces to be reinforced and upheld by a great National Volunteer organization called the Organized Reserves, which will only be employed in the event of a National Emergency declared by Congress.

We are particularly interested at this time in the 3rd component of the Army of the United States or the Organized Reserves. This component will form the bulk of the Army of the United States. Its personnel serves voluntarily, and all the members thereof are assigned to some permanent unit of the Organized Reserves. It is a skeleton organization, existing in peace time only in the embryo, but with the framework so established that on the outbreak of war, the needed man power can be quickly absorbed into this framework. The reserves are to furnish more than half of the National Army, embracing the divisions and the miscellaneous auxiliary troops necessary to make a well balanced Army, the units are apportioned so as to give each community throughout the country its share of the force to be raised. The framework that is established in time of peace consists of officers, and a very limited number of non-commissioned officers. We have at the present time nearly 80,000 reserve Officers, veterans for the most part, of the World War. Approximately 7,000 of this number are Medical officers. The formation of this component of the Army is a great departure from any military policy hereto pursued.

Developed along the proper lines it will produce a force which is at one time adequate, efficient, economical and in thorough keeping with our form of government and our traditional policy of entrusting the defense of the nation to the citizens of the country.

The Organized Reserves is fast being placed on a firm basis. The answer of former service men, and younger men who have become eligible for the Organized Reserves has been gratifying in most branches. However, men have not come into the Reserves as rapidly as we had hoped for. As previously noted there are approximately 7,000 Medical Reserve Officers at the present time. We need 50,000. Why is it, that as a class, medical men are holding back. The answer can be summed up in a few words. There are few Doctors with whom I have talked to who do not have some complaint to make against the Army, either fanciful or real. The usual complaint is something like this: I went in the service as a First Lieutenant as soon as war was declared, Dr. "So and So" didn't enter the service, and when I returned home I found that he had all of my patients or Dr. "So and So" returned home as a Major while I who held more important positions than he did, and I know I am a better doctor, returned as a Captain; or I have practiced Surgery for ten or more years, yet when I went into the Army I was made to do everything else but Surgery. We all know that such things happened and that there were many cases of injustice. Why did these things happen? Because at the outbreak of the war, we had no definite military policy. The Medical Corps was increased practically overnight from 1,500 to 35,000 members. There were bound to be many cases of square pegs fitting in round holes. Our present defense laws will do away with the large majority of these complaints in the future. In the first place it is provided that former officers can be commissioned in the Reserve Corps, in a grade higher

than that in which they were discharged, provided they served in the lower grade a certain length of time varying from three months to one year. It further provides for promotion in time of peace, after each period of five years in the Reserve. Furthermore, each officer is assigned in peace time to the unit for which he is especially qualified and as far as possible according to his own wishes. It is with this unit that he will go to war. In case of war it will not be necessary as formerly to pour the man power of the Nation into great central hoppers for organization and classification, because organization, classification and assignment will have already been accomplished.

There is a misunderstanding prevailing among those eligible for membership in the Organized Reserves regarding active, duty, and which I would like to correct at this time. In time of peace the maximum obligation for active duty for Reserve Officers is 15 days in any one calendar year. However, Reserve Officers can be ordered to active duty only within the limits of funds appropriated by Congress for this specific purpose. Any officer upon whom such a call to duty would work a hardship, may be excused on his simple statement. Before being called to active duty, the consent of the officer concerned is always obtained. Other than specified above the Organized Reserves can only be called to active duty upon the declaration of War by Congress, in which case if you are not a member of the Organized Reserves, you would either go voluntarily or be drafted in the lowest grade.

It is difficult to estimate the number of trained men that will result under our present laws, but there are certain influence that will tend to give it wide appeal to the men of the country. In the first place, as the organization of the Citizen Army progresses, it will become apparent that men who hope to lead in time of war should train for and join the Army of the United States in time of peace. Further-

more, with the Citizen Army organized on a definite basis in each locality, and with the best men of the Nation identified with it, we may count upon the development of a general sentiment that it is the decent, recognized thing for every self respecting American to give a limited portion of this time to prepare for service in the event of a National Emergency.

As Medical men we are particularly interested in the Medical Department of the Army. Where any large group of men are to be employed on a given task, their organization into suitable groups is essential to the accomplishment of satisfactory results. A machine on a firm foundation must be created, each working in harmony with the others, and all dominated by a single will. No more complete and intricate machine exists than a modern Army, and that part relating to the administration of the Medical Department is one of great and essential importance. Until recently this point has been too often overlooked. It is comparatively easy for a doctor to care for wounded actually under his hands, but the problem in war is to bring together the wounded man, the Surgeon, and the necessary supplies and shelter without undue interference with combat activities. As a war measure the Medical Department is particularly concerned with broad consideration of the man power of the Nation, her most important material resource, her only defense in time of war. The Medical Profession must accept the responsibility for the conservation of the health of the National man power. This can only be accomplished through civilian channels in peace, and the Medical Department of the Army and Navy in War.

We have just emerged from a World War in which the organization of the Medical Department was put to a severe test. While found to be fairly satisfactory, defects were noted from time to time during the progress of the war, and whenever possible were immediately corrected. As a result of the many lessons learned the

Medical Department has undergone a re-organization. To those familiar with the organization of the Medical Department existing prior to the World War, the addition of new agencies or elements in the relay system from front to rear, and many changes in names and functions will be noted. Perhaps one of the most noteworthy changes is the adoption of the Medical Regiment in lieu of the old Sanitary Train.

Upon the declaration of war, the resources in man power becomes available for the defense of the Nation through mobilization. Mobilization may be defined as collecting physically fit men and assembling them into military units in readiness for War. The speed of mobilization must be such as to produce men organized into units fast enough to meet the demand of the military situation, if the success of the forces in the field is not to be jeopardized. The method of mobilization must rest upon a sound Medical basis, otherwise the casualties from disease, incident to bring together large numbers of individuals, will destroy the effectiveness of the system.

We are interested primarily in the oncoming generation, for upon them rests the future of our Nation, and perhaps in a larger sense than we may realize at this moment the future of our civilization and the world. The preparation of that generation is in our hands. The elements of National strength are many, but among them physical health is the most important. The blood that feeds the brain is created in the body, and as a result a sound body makes for a sound mind and sound thinking for sound morals. All of us know from experience how difficult is clear, sane thinking when we are temporarily physically unfit, and if we take the time to study the problem, we shall discover that there are few instances of really great accomplishment by men who are physically suffering, or by a people who are physically weak. National health is so funda-



mental that it can be taken as a fairly good index of the virility of a nation. History is almost one continuing example of nations that rose to their greatness when physically fit and crumpled when they became physically unfit.

An analysis of the World War statistics show that of the men legally qualified for service, approximately 50% showed physical defects of some kind, and nearly 25% were rejected or assigned to limited service because of physical defects. The weeding out process caused a serious delay in the speed of mobilization. Unless corrective measures are instituted, the time may come when our National existence will be jeopardized by this condition of physical unfitness and the consequent inability to mobilize our man power more rapidly for defense. The problem is primarily one of public health work to prevent the development of these defects, and secondarily of Medico-Military efficiency to increase the speed of induction. Medical men, whether in civil or military life, are vitally concerned in the solution of these problems.

At the present moment the situation throughout the world is far from reassuring. We cannot, if we would watch with indifference the gathering clouds of war in many parts of the world. The Near East has been the theatre of war since 1914, and is today seething with revolution. Although deep in our hearts we desire peace, it is not difficult to imagine ourselves again forced into conflict, as we were in 1917, in the defence of civilization and principles upon which it was founded. Looking across the Pacific we see oriental nations contending for supremacy, and destiny may yet demand that we take more than a passing interest in Far Eastern events.

At home our situation is seriously complicated by the teachings of numerous pacifist organizations, and men and women of high purpose preach the doctrine of our disarmament blind to our recent war experiences, and deaf to the appeal of reason. Others, with base design, or in gross ig-

norance, strenuously advocate internationalism, little realizing the disaster that would soon overtake the rest of the world as it has overtaken unhappy Russia.

History and our own experience point conclusively to man's need for providing for lean and dangerous times. Until the time comes when we can be assured that war is a thing of the past, we must provide the security necessary to protect those high ideals of our Nation, wherein every man is assured equal opportunity and justice, without regard to race, religion or color. This is true democracy, but such democracy must demand that its citizens thus protected, shall in turn protect their government when an emergency demands.

The government is now asking those of you who are eligible to do your part by joining the Organized Reserves. What are you going to do about it. Permit the revolutionaries to continue their preparations for destruction and do nothing to further the preparations of the National defences of the country? Can you shoot as straight for defense as that Red "Fighting Unit" can for destruction? Indifference to your duties is really a tacit agreement with those forces which are constantly exceedingly busy in their efforts to disrupt our Nation. Their efforts may be more or less open like those of the Workers Party of America, or they may be supine like those of the Womens Peace Union, but the ultimate result is the same. This country may be run by the Capitalists which is bad if we are rabid laborites, or it may be run by labor, which is worse if we are plutocrats. It may be run by the Democrats, which is an outrage if we are Republicans, or it may be run by the Republicans, which is a catastrophe if we are Democrats, but no matter what party it is run by, it is the best and only country we have, and it behooves all of us to do our utmost to preserve it.

"I believe in the United States of America as a Government of the people, by the people, for the people; whose just powers

are derived from the consent of the governing; a Democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable; established upon those principles of freedom, equality, justice and humanity for which

American patrons sacrificed their lives and fortunes. I therefore believe it is my duty to my country to love it; to support its constitution; to obey its laws; to respect its flag; and to defend it against all enemies."

## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### PNEUMONIA SIMULATING APPENDICITIS IN CHILDREN

White of Iowa in *The Journal of the American Medical Association*, March 1, 1924 pointedly remarks that pneumonia often very closely simulates appendicitis.

In children the diagnosis often is difficult because of their inability to record in their mind the sequence of events or to recite to the examiner their true feelings. They are often restless and frightened and breathe either hurriedly or irregularly.

White cites other authors as stating that in one institution alone out of 145 cases of lobar pneumonia 17.6 were admitted with the diagnosis of acute appendicitis.

Thoracic pain in childhood very often is referred to the abdomen, and frequently there is tenderness and rigidity.

The principal criteria to bear in mind are: 1. Has the child had a hard or unquestioned chill? 2. Does it have a very high temperature? 3. Is the leukocyte count high?

Frequently one may experience a chilly sensation or a mild rigor but a frank shivering chill practically never occurs in early appendicitis.

In pneumonia the temperature rises early

to 103 or 104. In appendicitis the rise is slow and rarely excels 100½ to 101. Even in gangrene and suppurative appendicitis the temperature rarely reaches 103 or over.

In children, the leukocyte count in pneumonia is usually 20 to 30,000 and often rises to 50,000 whereas in appendicitis 12 to 15,000 is usually the upper limit, though once in awhile it might touch 20,000.

The value of pain, tenderness, and muscular rigidity depends upon the age and intelligence of the child.

He specifically states that the Roentgen Ray examination often will reveal the affected area in the lung, when it is quite impossible to find it clinically.

White cites 3 very interesting cases in which the diagnosis being obscure were definitely made by one or more of the above mentioned points and he summarizes by saying (1) that the difficulties are multiplied because of the tender age, lack of intelligence or fear on the part of the patient, (2) a severe chill at the onset, temperature over 102, leukocyte count near or over 20,000 should engender extreme caution and intensify efforts at differentiation. A careful urine examination should always be made.

## DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

### PHENOLPHTHALEIN ERUPTIONS

About thirty years ago the Hungarian Government passed a law that certain wines should have a small per cent of phenolphthalein added as a means of determining certain grades of wine on the market. The drug was thought to be harmless and without any action. It was found necessary to repeal this law almost immediately as it was found that the users of the wine developed a mild diarrhoea. This is the history of the discovery of the most widely used purgative of today.

Phenolphthalein is a yellow, white powder, odorless and almost tasteless, soluble in alcohol and only slightly soluble in water. It is not dissolved by the acids of the stomach. Therefore passes to the intestine without being changed and has no irritating effects on the stomach. Its purgative action is due to a stimulation of peristalsis. The dose is one and one half to three grains, and easily tolerated by all ages, from infancy to old age. Possessing such properties it naturally has become a very popular drug. This is shown very clearly by the following list of proprietary purgatives on the market whose action depends on the presence of phenolphthalein:

Analax  
Aromatic laxative tablets  
Alophen  
Cholelith pills.  
El Zernac  
Exurgine  
Ex-Lax  
Laxophen  
Laxine  
Laxerconfect  
Laxothalen tablets

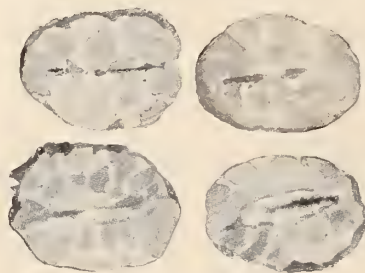
Normalas  
Partola  
Paraphthalein  
Phenalin  
Phenolax wafers  
Phenolphthalein agar  
Phenolphthalein laxative  
Probilin  
Prunoids  
Purgatol  
Purgen konfect  
Purgella  
Purglets  
Purgo  
Purgolade  
Purgotin  
Purgylum  
Rexall orderlies  
Rhuphen  
Taurocol tablets  
Thalosen  
Veracolate  
Zam Zam

The interest in the above list to the dermatologist is that many individuals have an idiosyncrasy to phenolphthalein which manifests itself in the form of a peculiar skin eruption. Only one other toxic agent is capable of provoking an identical eruption, that is antipyrin. This eruption has been described by Wise and Abramowitz, and numerous cases reported. It is very possible that many phenolphthalein eruptions are not recognized, since so few people have studied the eruption and since there is such extensive use of the drug. Wise and Abramowitz describe the eruption as "A few widely scattered and numerous irregularly grouped polychromatic macular plaques, varying in diameter from that of a pinhead to several inches, varying in color from pink to bright red, dusky violaceous



and deep purple; it is relapsing in course, chronic in nature and usually results in a protracted pigmentation of the affected areas of skin. Slight scaling may accompany the evolution of the lesions; a peculiar mottling is sometimes seen in the central zone of the macules; vesiculation, erosion and superficial ulceration may occur, more especially on the mucous membranes of the mouth and on the skin of the genitals; a burning sensation sometimes precedes and accompanies the appearance of the patches; moderate to severe itching may be a symptom during their evolution. The eruption, clinically, is a persistent multi-form erythema, which, instead of vanishing without leaving a trace, persists more or less indefinitely and terminates in a yellowish-brown deposit of pigment in the affected sites."

Thorough purgation and the discontinuance of the drug is followed by recovery except for a varying degree of persistent pigmentation at the sites of the old lesion. New attacks can be provoked by again taking the drug. Phenolphthalein eruption should be borne in mind in treating a chronic or recurrent eruption which resembles a dermatitis medicamentosa. A thorough investigation as to the purgatives the patient has been accustomed to use should be made. In some cases a therapeutic test should be made by the ingestion of a few large doses of the drug, which in susceptible individuals will cause an acute exacerbation. A complete review of the literature and an exhaustive study of the condition can be had from an article—"Phenolphthalein Eruption", Fred Wise and E. W. Abramowitz, Archives of Dermatology and Syphilology. March, 1922.



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Rolled Soft Wheat—25% Bran

The Quaker Oats Company, Chicago

## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Delzell, W. R. and Lowsley, O. S.: Diagnosis and Treatment of Diseases of the Seminal Vesicles. Transactions of the Section on UROLOGY of the American Medical Association, June, 1923.

The writers state that the fundamental principles in the treatment of infected seminal vesicles are the securing of drainage and then the application of antiseptics to combat the invading organism. They cite Belfield's method of performing vasotomy, but think that is preferable to dilate the ejaculatory ducts through the urethra; and after the ducts are catheterized, antiseptics, such as argyrol, mercurochrome, etc., may be injected into them to combat the infection; and besides, by so doing the outlines of the vesicles may be demonstrated by x-ray after injecting these with sodium iodide. As the orifices of the ejaculatory ducts are situated on the lateral walls of the verumontanum, and to either side of the utricle, they may be easily found with the posterior endoscope. The authors describe their own instrument with which they do their catheterization, thinking that it has advantage over others that have been used.

In regard to etiology, they state, "Chronic pelvic congestion, previous infections of the vesicles and anatomic anomalies are predisposing factors to seminal vesiculitis, which may be bacterial or non-bacterial in origin. Those of the non-bacterial origin are caused usually from improper sexual habits. The infective type gave a history of gonorrhea in more than 90 per cent of the cases. The most frequent organism found is the gonococcus, though others have been frequently cultured, such as streptococcus, staphylococcus, B. coli, B. proteus, etc "The pathology of the seminal vesicles is similar to that of other structures having a cavity lined with mucous membrane".

"The diagnosis of seminal vesiculitis is based on the history, and physical and laboratory findings." The common symptoms which the authors mention are history of urethritis, or stricture with discomfort in the perineum increased on defecation, tenesmus, frequent erections without sexual stimulus and frequent nocturnal emissions, and the presence, often, of blood and pus in the semen. Also are mentioned in their experience watery urethral discharge, recurrent epididymitis, pain about the rectum, backaches, arthritis, dysuria and mental depression.

The treatment is both surgical and non-surgical. It is seldom necessary to do a vesiculotomy. The non-surgical treatment, consisting principally of massage, dilations of the posterior urethra, and endoscopy with catheterization of the ejaculatory ducts and injection of antiseptic solution, usually cures the patient. The few cases that are not relieved in this manner are greatly benefitted by seminal vesiculotomy.

The authors conclude as follows:

1. All cases of seminal vesiculitis, except those with abscess formation, should have the benefit of palliative treatment before being subjected to operative procedures.

2. The seminal vesicles may be injected with antiseptics through the ejaculatory ducts.

3. This procedure improves the drainage of the seminal vesicles by dilatation of the ejaculatory ducts, and affords an easy method for medication and for seminal vesiculography.

4. Seminal vesiculography is useful in diagnosing chronic abscess formation of the seminal vesicles, stricture of the vasa deferentia or ejaculatory ducts and other pathologic or anomalous conditions of these organs."

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## MINUTES

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### MINUTES HOUSE OF DELEGATES

SOUTH CAROLINA MEDICAL ASSOCIATION

1924

ORANGEBURG, S. C.

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The House of Delegates of the South Carolina Medical Association was called to order at eight-thirty p. m., April 15, 1924, by the President Dr. L. O. Mauldin of Greenville.

Dr. W. P. Timmerman, Chairman of the Committee on Credentials, called the roll of delegates, and a quorum being present the President called for the report of the Secretary-Treasurer, Dr. E. A. Hines of Seneca. On motion of Dr. N. B. Edgerton, duly seconded, the report was accepted and the Secretary commended for his work.

#### REPORT OF THE SECRETARY-TREASURER FOR 1923

There were 36 constituent county societies in good standing in 1923, with a total membership of 687. This is a slight decrease over the previous year. There are 1368 physicians in South Carolina. We should certainly enroll 1000 in the State Medical Association. Each year two or three county societies are suspended for non-payment of dues and we lose thereby about 100 members. About 100 members also fail to pay dues in the active societies. If these suspensions could be prevented, the normal enrollment would be about 900. This condition of affairs however obtains throughout the United States. During the past year there has been a remarkable increase in the scientific activities of both the county and district societies. In many cases the programs have been enriched by invited guests of national and international fame. It has appeared to your secretary that the officers of the county and district societies have been

elected from the standpoint of the service they are in position to render and their co-operative efforts have been thus rewarded. It is believed that the wise leadership and better programs will so intensify the interest of the profession generally that there will be a desire on the part of the members to keep their dues paid up and thus a steady growth of the Association be assured. Your secretary visited several sections of the state during the year and received the most cordial support of the officers in this regard. Your President from the moment he was inducted into his high office made himself familiar with every detail of the Association work and responded to many invitations for personal visitation. During 1923 your secretary completed the service of two years as President of the Conference of State Secretaries, Presidents and State Health Officers of the 16 states comprising the Southern Medical Association—an honor which was highly appreciated. In line with the ideas of modern business offices your secretary maintains an up-to-date loose-leaf bookkeeping, and card-index accounting system and in the past year has adopted a new plan of mailing immediately copies of all receipts for membership dues direct to the American Medical Association headquarters and in addition sends personal membership cards to the individual member.

To add further to the efficiency of the work of the State Association a latest model lantern has been purchased and will be in use at this session for the convenience of members who wish to illustrate their papers with lantern slides.

Your secretary begs to call the attention of the House of Delegates to the possibility of reducing the number of committees, and thus conserving the time and energies of this body as for instance the following: The Study and Prevention of Tuberculosis, Child



Welfare, Mental Hygiene and the Study and Prevention of Venereal Diseases. Most of these committees were appointed upon the recommendation of past Presidents or Secretaries for the purpose of establishing specific provision by the state for the carrying on of preventive measures along these lines. Thanks to the wonderful influence of the South Carolina Medical Association all of these objects have been largely accomplished.

The deletion of the committee on Prevention of Venereal Diseases involves an amendment to the By-Laws to this effect.

Much of the field covered by all of these committees could now be taken over by the committee on Public Health and Instruction and the committee enlarged if necessary. In conclusion your secretary begs to express his great appreciation of the cordial co-operation of the officers and members in his work during the past year, the financial report will be made by the chairman council.

Dr. S. E. Harmon, as Chairman of the Board of Councillors, made a financial report, both for the Association and for the Medical Journal. This report was approved.

Reports from the following Councillor Districts were then read:

First District—Dr. A. E. Baker

Second District—Dr. S. E. Harmon

Third District—Dr. T. L. W. Bailey

Fourth District—Dr. J. R. Young

Fifth District—Dr. T. N. Dunlin

Sixth District—Dr. C. R. May

Seventh District—Dr. T. R. Littlejohn

Eighth District—Dr. L. A. Hartzog

These reports were approved as read.

It was moved by Dr. F. H. McLeod that the House of Delegates of the South Carolina Medical Association memorialize Legislature and ask for a definite appropriation for the purpose of prosecuting illegal practitioners. Motion seconded.

Dr. E. L. Kibbler offered as a substitute motion, that the Chair appoint a committee of three to call on the Governor and Attorney General and make known to them that

there are illegal practitioners in South Carolina, in order that the Attorney General may notify the solicitor in each district to see if there are any illegal practitioners in his district, and if so to prosecute them. Substitute motion accepted, and after considerable discussion, carried.

Dr. M. H. Wyman, Columbia, read the report of the Committee on Public Policy and Legislation. This report was approved.

At this time it was announced that Dr. William Allen Pusey, President-Elect of the American Medical Association, had arrived, and a committee was sent to the hotel to escort him to the meeting of the House of Delegates.

Dr. E. A. Hines in the absence of the Chairman Dr. W. F. R. Phillips of Charleston made the report of the Committee on Scientific work. This report was approved.

Dr. Robert Wilson, Jr., Charleston, read the report for the State Board of Health. This report was approved.

Dr. W. R. Wallace, Chester, read the report of the Committee on Health and Public Instruction. This report was approved.

Dr. A. E. Boozer, Columbia, read the report of the State Board of Medical Examiners. This report was approved.

Dr. E. A. Hines, Seneca, read the report of the Delegate to the American Medical Association. This report was approved.

Dr. Milton Weinberg read the report of the Committee on the Prevention of Venereal Disease. This report was approved.

Dr. F. H. McLeod read the report of the Committee on Hospital Standardization. This report was approved.

Dr. J. C. Harper, Greenwood, read the report of the Necrology Committee, which was approved. During the reading of this report the members of the House of Delegates stood.

Dr. C. B. Earle, Greenville, made the report for the Committee on Military Affairs. This report was approved.

Dr. E. A. Hines, made the report of the committee appointed to revise the Constitu-

tion and By-Laws. They offered the following amendments.

That Article IX of the Constitution be amended to read "The officers of this Association shall be a President, a President-Elect, two Vice Presidents, a Secretary, and eight Councillors" (This must lie over one year.)

The committee asked that the Constitution be corrected to accord with the present custom of electing Councillors for two years. (Approved.)

The Committee also suggested that the House of Delegates meet at an hour to be fixed by the Committee on Scientific Work.

The Committee also suggested that X-Presidents be given the voting privilege in the House of Delegates.

It was moved by Dr. W. R. Wallace that the changes in the By-Laws recommended by the Committee be adopted. Motion seconded. Dr. Frank Lander offered amendment—that the election of officers of this Association shall take place after the scientific session is finished. Vote on the amendment, lost. Vote on original motion, Carried.

It was moved by Dr. T. G. Simons that Chapter 1, Section 4 of the By-Laws be amended to read that honorary membership shall be conferred after twenty-five years of consecutive membership. Motion seconded, but lost.

Dr. Baxter Haynes, Spartanburg, moved that the Chair appoint a committee to arrange for a joint meeting in Columbia next October of the State Medical Association, the State Pharmaceutical Association and the State Dental Association. Motion seconded, but lost.

The Chairman mentioned the fact that the meetings of North and South Carolina conflicted and suggested a motion that a change be made in the time of meeting of this Association. It was moved by Dr. N. B. Edgerton that this be left to the program Committee. Motion seconded. On motion of Dr. W. R. Timmerman this motion was tabled.

Moved by Dr. J. S. Rhame, Charleston that the Secretary publish in the January, 1925, number of the Journal, the names of the members, honorary members and honorary Fellows of this Association. Motion seconded and carried.

Invitations for next Annual Meeting were extended from Sumter, Spartanburg and Greenwood, and upon vote Spartanburg was elected as the meeting place for 1925.

Dr. Robert Wilson, Jr., moved that the House of Delegates of the South Carolina Medical Association endorse the legislation proposed by the State Board of Health providing for the compulsory antirabic vaccination of all dogs, and that the members of this body be urged to bring this matter to the attention of their legislators and to impress them with its importance. Motion seconded and carried.

The election of officers resulted as follows:

President—D. L. Crosson, Leesville.

1st Vice-President—Geo. Bunch, Columbia.

2nd. Vice-President—L. C. Shecut, Orangeburg.

3rd. Vice-President—C. J. Lemmon, Sumter.

Sec'y-Treasurer—E. A. Hines, Seneca. Councillors:

Second District—S. E. Harmon, Columbia

Fourth District—J. R. Young, Anderson

Sixth District—C. R. May, Bennettsville

Eighth District—C. I. Green, Orangeburg

Member State Board of Medical Examiners:

Sixth District—E. M. Dibble, Marion

State at Large—A. E. Boozer, Columbia

No further business appearing, the House of Delegates adjourned.

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### THE PHYSICIAN'S SPIRIT OF SERVICE.\*

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PRESIDENTIAL ADDRESS—By Dr. L. O. Mauldin, Greenville, S. C. Retiring President of the South Carolina Medical Association.

\*Read at Orangeburg, S. C., April 16, 1924.

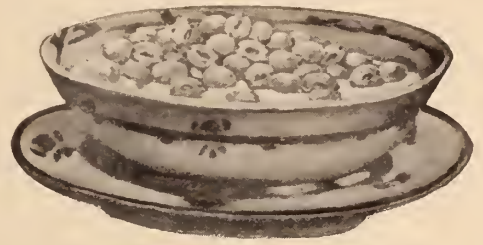
Ladies and Gentlemen:

For the honor you have conferred in making me your presiding officer during the past year you have my sincere thanks. I have been proud of the privilege of complying with the requirements of the office in accepting the duties that have been placed upon my shoulders and truly trust that my activities in the interest of medicine and surgery in this state have been commensurate with the high aims to which the regular medical profession is directed and destined.

A keen interest in the welfare of the Medical Profession and a peculiar appreciation of the service that is usually rendered by my brethren in the profession has led me to the theme of thought which is the subject of my address to you today.

#### THE PHYSICIAN'S SPIRIT OF SERVICE

By the physician I mean the true doctor, the physician of the regular medical profession, the doctor of high ideals and worthy sentiments that have been hibernated by his progenitors and transmitted through them in the process of time and the maneuvers of sentiment to make the regular doctor of the present day and generation, be he specialist in any particular line or specialist in all lines, or devoting his life to a practice of his profession in city, town or country. For is it not true that the service of a good physician in any one speciality or phase of medical work, when it comes to a consideration of his service, is co-equal with that of another with equivalent training and devotion to duty? Is it not true that he who sits behind the microscope and aids in diagnosing, or he who labors at the chemist crucible or in the biological laboratory to evolve some balm or method of treatment to relieve the sick, or he who works in the dissecting room to teach the medical student the intricacies of the human body is rendering service that is as valuable to mankind as is the eminent physician who diagnoses or treats in his general or special line, or performs the operation or rides over long country roads to see his patients? Is it not a fact that all of these have the great idea



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of service back of their work? It is my observation that every doctor in his particular sphere of work renders a decided service to mankind and that service is a potent influence for good and must be considered a service which cannot be valued in dollars and cents, even though the doctor has to accept a remuneration for the service rendered. We cannot put a material price on the human life, neither can we measure with money the value to a particular individual that a relief from pain or suffering is worth. When a doctor, as he frequently does, prolongs a human life, or even relieves a patient of pain or suffering, he renders a service to that patient and the service remains as great whether the patient pays him five thousand dollars or one dollar, or a simple "Thank You". The fact in either instance is outstanding that a decided service has been rendered. It is the spirit in which this kind of service is rendered by the true physician that I wish to direct your attention on this occasion.

The spirit in which a physician renders his service is reflected in all the details of his life and is a factor which determines his success or failure as a doctor.

Verily "God writes in a legible hand all over the faces of created things". He has written modestly in the drooping petals of the violet in the valley; He has written Majesty in the snow-capped summit of the eternal hills, and He has written in the face of every individual the outward expression which betokens the inward character."

The physician's spirit of service is written in his countenance, it is written in his sick room manner, it is written in his operating room technique, it is written in his hospital behavior, it is written in the up-keep, equipment and care of his office, it is even written in the manner that he or his office answers a telephone call, it is written in the manner in which he makes responses to his calls, it is written in his inclination to apply the Golden Rule in everything connected with his work, and it is told by the

appreciation that his patients show for the service he renders.

After all a man's greatest monument is his life's work and when we sift the serious thoughts of life, we must arrive at the inevitable conclusion that a man's greatness is measured by his ability and disposition to render the best possible service to his fellow man. The physician, by virtue of his training and knowledge, is peculiarly fitted to render a great service to mankind and the spirit in which he renders this service determines his greatness.

Even though, the practice of medicine under the stress of a strenuous age and the requirements of an advancing science is divided into many specialties, it is refreshing to realize that at the foundation of all of its specialties exists the principle of service and it is a true spirit of service that pervades all of these specialties that makes the regular medical profession as enduring as truth and as progressive as the ingenuity of man can induce science to progress.

In this day of enlightenment the world is moving forward with a wonderful stride of progress. The old earth itself, while it has never stood still, seems now as though it is becoming endowed with sensitiveness, so that when one part of it is touched every other part feels the effect of the touch. Scientific achievements are being accomplished in a wonderful way and coincident with the advancement of science the regular medical profession is making discoveries and inventions that are almost beyond the comprehension of man. By virtue of these advanced steps in medical progress, no doubt, the new conditions have taught new duties and new methods of rendering service have been brought about, but the underlying spirit of service is a living, breathing kinetic force which is the motive power back of our success and is acting through the instrumentality of science to make the doctor more efficient and a greater asset to the community in which he lives. With increased efficiency his spirit of service must

necessarily develop a greater horizon of usefulness.

Yes, as an optimistic prediction of the future we might venture to assert that as new conditions teach new duties and as time moves on, the progress of civilization will bring men into closer contact. The great civilizing agencies, Christianity, the press, steam, electricity and many other things will continue to multiply blessings for mankind and our great race will meet and solve every problem that now seems dark. Our industrial, agricultural and constructive enterprises must increase in their usefulness and greatness and through all of this prospective progress we can see the Finger of God pointing science to the solution of still more unsolved problems, and in the solution of all these we will find the physician, a true man of science, working out for the service of mankind, the problems of prevention of diseases and the restoration to health of those who are diseased.

The true spirit of service on the part of the Medical profession encourages a spirit of progress in all lines of human endeavor, for it increases physical and mental efficiency and by so doing makes a better citizenship with more fruitful results from its labors in the constructive upbuilding of all our commercial enterprises.

The true doctor's spirit of service is so high toned and honorable and so full of inspiring confidence that any suggestion of quackery in the patient's mind is set at rest, and at this time in the history of our country when diploma mills and correspondence schools are grinding out diplomas and even licenses for numerous quacks and cults and medical pretenders it behooves the true physician by his exemplary and exalted spirit of service to so conduct himself that the public can know in whom to place confidence. This is the method upon which the regular medical profession should rely to kill the influence of the quacks and cults and keep them from gaining a legal and unprofessional foot-hold in any state, and especially is this true in South Carolina

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where the medical profession is a time honored one and protected by a well conceived Medical Practice Act which makes it compulsory that even the average doctor in our state be clean and as competent as in any state in the Union. We should continue to watch our step and make our spirit of service such as to inspire confidence in us and in this way uphold the dignity and prestige of this time honored and service rendering profession. The time is not now and never will be when the thinking people of this country will turn their backs upon a profession that has always rendered a true service to the people regardless of poverty or wealth. The doctor's willing spirit of service is the priceless thing in his life which makes him a leader in his community and a citizen worth while.

The practice of medicine is a serious thing because it involves a consideration of the things that are of most vital concern to everybody, yet the doctor who succeeds best is usually the one who is most cheerful in doing his work. The doctor who renders the best service is the nearest approach to the ideal doctor. He is a christian gentleman, well learned in his profession and skilled in the practice of it, a student and a diplomat, a judicious charger and a good collector, he knows no strangers, he knows when to say "Yes" and when to say "No". He is "Friends to all and allies with none". He is not too busy to take his needed recreation and not so idle as to be a loafer. He is not so enthusiastic as to forget the courtesy due his colleague yet he is deeply interested in his work. He is reserved, but not so modest as to allow his rights to go unprotected. He is good, but not "Goodie

Goodie". He is clean in his thoughts and refined in his manner and his promise is as dependable as truth itself, and his service is the best that is within his power to render.

I often think that the "Man" that Rudyard Kipling had in mind was the ideal doctor when he penned these lines:

"If you can talk with crowds and keep your virtue,

Or walk with kings—nor lose the common touch

If neither foes nor loving friends can hurt you,

If all men count with you, but none too much;

If you can fill the unforgiving minute  
With sixty seconds of distance run,

Yours is the earth and everything that's in it,

And—which is more—you'll be a man, My son!"

The farmer, the mechanic, the lawyer, the teacher, the minister and the expert in any other line of worthy endeavor has his sphere of usefulness and service, but where in all the universe is there an occupation or a profession more resplendent with a spirit of service than is the medical? Where is there a profession more like The Great Healer in the performance of service? For is it not written of Him that He went about doing good? He caused the lame to walk. He restored the sight of the blind and He healed the sick.

There is no profession that is brought closer to mother nature than is the medical. In fact it is figuratively nature's own child born of her womb, nurtured at her bosom, reared in her service and is proud to be a student of her laws.



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City..... State.....

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# The Journal

OF THE

## South Carolina Medical Association

VOL XX

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## EDITORIAL

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### OUR PRESIDENT.

Dr. D. M. Crosson, was born at Prosperity, Newberry County, S. C., Sept. 29, 1858. His father was of Scotch Irish descent. His mother was of Dutch descent.

His father, John T. P. Crosson, was graduated before the Civil War at Erskine College, and was regarded as a classical scholar and made a reputation both as a teacher and writer, but for a number of years devoted his time to his larger farming interests. His mother, who was Rosanna C. Cook before marriage, was a woman of many rare qualities and had much to do with his early life and training.

Dr. Crosson was reared upon the farm and is of an agriculturist turn of mind as

well as a scientific man. His early education was obtained from the common schools of the community and from the Prosperity Academy. He afterwards attended Erskine College three years, where he made a good stand in his class and as a member of the Euphonian Literary Society made a reputation as a debater.

After leaving college he began the study of medicine, and as was the requirement at that time, he read for one year under the late Dr. A. F. Langford, Prosperity, S. C. Then attended the South Carolina Medical College Charleston, S. C., afterwards graduating at the University of Tennessee, with first honor in a large class and delivered the valedictory for the class. Has since taken post graduate courses in dif-





DR. D. M. CROSSON

ferent places, Baltimore, New York, etc. After completing his medical course he located at Lewiedale, S. C., where he spent ten years and did a large practice, both in medicine and surgery. Then he moved to Leesville, S. C., where he has been since, and is regarded as a leading physician and surgeon of his County.

Dr. Crosson was married to Miss Sara C. Bodie, Sept. 27, 1883. They have five living children, three sons and two daughters, all married but the baby girl. He has four grandchildren. He is regarded as a good financier and is now President of the Farmers and Merchants Bank, Leesville, S. C. He has practiced his profession for over forty years, and many enviable distinctions have crowned his work, as a physician and surgeon and as a planter, business man and public leader.

For years he was regarded as the largest farmer in Lexington County, but four years ago sold his lands, which are now owned and cultivated by small farmers, as he thought this best for the county. He has always shown his loyalty to his chosen profession and always advocated a high standard of medical qualifications and medical ethics. In former years he organized the first medical society ever organized in Lexington County and the county maintains a very creditable medical society to this day to which all reputable physicians belong.

He served on the Medical Examining Board for Lexington County before the

State Board was established. He served on the Examining Board for the County during the last war and volunteered for service before the armistice was signed. He holds his commission. He has always found time to participate in political affairs. Since 1900 he has served his County ably, three terms in the Senate and is Senator at this time. He has taken much interest in Legislation and being a member of the finance committee and a number of other important committees has been an influential member of the General Assembly. He introduced the first good roads measure ever introduced in the State Legislature and is the father of the automobile license law. He is a life member of the National Association of Good Roads. He introduced the Auto Title bill and passed it in the last legislature and other measures that gave him prominence. He has always stood for a high standard of medicine and fought bravely to maintain its rights and proper code. He has always advocated progressive advancements in agricultural education, and everything that professionally, financially, socially and religiously will up-build the Country. He belongs to the Masonic order and a great many others.

He belongs to many medical societies and is devoted to his profession. He has practiced for over forty years and is still in active practice.

He has untiring energy and will devote himself to the duties as President Elect of the South Carolina Medical Association.

## ORIGINAL ARTICLES

### ANTE-PARTUM CARE.

*By L. C. Shecut, M. D., Orangeburg, S. C.*

In presenting this paper which deals with the Ante Partum care of our patients, I want you to distinctly understand in the beginning that I am just a "Buck Private" in the ranks of the general practitioners and I shall approach this subject from this standpoint. In some of the larger cities of our State there are men who practice Obstetrics, and nothing else; and for these men to give the proper pre-natal care to their patients is a comparatively easy job, for they have nothing else to do. But what have we—the rank and file—of the profession been doing for our own patients, when they commit themselves to our care to be prepared, watched and protected during that long period leading up to prospective motherhood. Have we done our full duty by them? If not, is it possible for us to do it, and if so, how? These are the questions uppermost in my mind, and I call upon you men of South Carolina in your vast experience of loyal and self-sacrificing devotion to the high ideals of our profession to settle this question today and let us get right with ourselves and the women of South Carolina on this subject.

Is it practicable for the general practitioner to safeguard and watch his antepartum patient for nine months? I am going to take the affirmative of this question. Somebody will have to take the negative and prove that it is not possible; or, we stand indicted here in South Carolina for neglect of duty; for, the records show that the mortality rate in South Carolina in 1918 was as great as it was in New

York State in 1872. Are we forty-six years behind the times?

First: Let us see what service we should render a patient when she commits her case to our care. A full physical examination is an absolute necessity to begin with. I know of no better place to begin this examination than the teeth and tonsils—find out if we have any lurking foci of infection there that will give us future trouble when the maternal kidneys begin to show the strain of elimination for the patient. Any old roots or infected dead teeth must be immediately removed, for this is now a painless operation under Novocain Anesthesia and there is no reason for the most nervous patient to be upset—when in the hands of a competent dentist. All that is needed for the examination is a good day light and a hand mirror to show the patient; when at hand, radiograms may be necessary in some cases. If tonsils are infected they must be cleaned up—either by the suction apparatus or removal—all depending upon the condition found. All that the general practitioner needs for this examination is God's free daylight and a tonsillar pillar retractor. We all know the relationship between hyperthyroidism and pregnancy. The worst cases of hyperemesis gravidarum I have ever seen in my twenty years experience have been associated with enlarged thyroid of a toxic nature. It is essential that we take especial notice of the thyroid gland in our pregnant patients.

Next, we should examine the lungs very carefully. My recent experience with my lung patients has shown me that I have been entirely too squeamish in my decisions about their treatment. I have recently had forced upon me two cases of tubercular patients, one, with a very slight apical infection, and the other patient with a history of glandular tuberculosis. Both



patients developed active tuberculosis after confinement and have had a hard fight to live. These patients should be aborted and sterilized. Above all things fix them so that they can never get pregnant again. We not only help to save the mother's life, but we stop the propagation of tuberculosis as far as the begetting of children with a predisposition is concerned.

The next thing is the patient's heart in its relationship to pregnancy. The presence of a chronic endocarditis is often followed by a fatal termination due to the fact that the hypertrophy which already exists is no longer able to meet the extra demands of pregnancy—and the valvular disease may prove a very serious complication during the latter half of pregnancy, causing cough, pulmonary congestions and edema—and even death is often the result in severe mitral cases. It is imperative to examine the heart of every pregnant woman in our initial physical examination, and if we find it all right and sound we can usually dismiss it from the list of our worries and safely assure the patient that her "heart-burn" is a misnomer and that she is really suffering from a "stomach-burn" or hyperacidity. On the other hand if we find it diseased we are fore-warned and can act accordingly, or actively interfere with the pregnancy at the first signs of grave symptoms.

The Wassermann test should be made as a routine. The State Laboratory makes the examination of the blood without cost, and it is a simple and short task to get it from the patient. I have never had any objection from the most fastidious of my patients when I tell them I want to find out if the blood is pure—just think what it means to the future child, aside from the mother's welfare.

Now the vaginal examination is necessary at least twice during pregnancy. First, when we make our general examination of the patient and then again our preliminary examination about two weeks before the expected time to determine the position of the child. In this first examination we can

get a general idea of the size and shape of the pelvis, whether the pelvic organs show any sign of disease, or whether there are any fibroids, infections, cancers or malpositions with adhesions. Then we should examine a catheter specimen of the urine chemically and microscopically, or have it done, as many of our pregnant patients start this period with an established pyelitis which if unrecognized and untreated will give serious trouble as the months advance. Also take the blood pressure and then look for varicosities over the legs, or a past history as to these and hemorrhoids.

During the late World War "preparedness" was the slogan and "system" the practice that led to its winning. And so it must be with us in our Obstetric work if we expect to meet with success. From a general observation, the conclusion is forced upon us that very few doctors have adopted any orderly, systematized method of handling their antepartum cases. Our patients consult us as they please; call us when they see us in the neighborhood; worry us over the phone; or, straggle into the office to talk over some minor matter when we are very busy with other cases. All of which is a great annoyance to the doctor and not much benefit to the patient. To obviate this troublesome and uncertain handling of the cases, I beg leave to call your attention to a suggestion made to me recently by a prominent obstetrician in our State. It is a plan which seems to be entirely feasible; it will save time, stimulate interest, and keep us in touch with our patients regularly, so that we can show them that we have their welfare at heart and are rendering them real service. When these patients see and realize this fact there is then no great difficulty in increasing our fee to an amount which would be more in keeping with the great responsibility we incur in accepting obstetrical cases. The current opinion, held by the vast majority of the laity, is that an obstetrical fee is rendered for services given at the bedside delivery, and in normal labors, with short detention, if this were really our

only service it would be a shame to take the money. The outline of the plan suggested is as follows: When the patient comes to engage your services take her into your office and explain to her very plainly the conditions under which you will assume charge of her case. First: she must have a physical examination to ascertain the present state of her health. After this she must agree to report at your office once or twice a month to have the urine examined and her blood pressure taken, and any other examination necessary. She is not to come just any time that suits her, but only on the days designated by the Doctor. And this is the key to the situation, set aside certain days in the week—say Wednesdays—as your obstetrical clinic days and have all your expectant cases report at the same time. This time belongs to them. You can take some individually and some you can take collectively into your private office and give the necessary instructions in personal hygiene. Discuss with them their diet, the character and quantity of food, the condition of the bowels, exercise, clothing, their sleeping quarters, as to fresh air ventilation. You can give them a list of the things they will need in delivery and how you want the bed fixed, and how you want a hard stiff mattress and not a feather bed—or if a feather bed is the only thing they have they must have some table leaves or boards cut to be delivered on. It is about as easy to deliver a woman properly in a wash pot as on a feather bed.

They will ask many questions, about frequency of urination, nausea and vomiting, heartburn, varicose veins, hemorrhoids, cramps, leucorrhoea and maternal impressions. You can dispose of all these, and then dismiss them, and let them know that you don't care to be bothered by unnecessary disturbance; but if they have forgotten anything that is on their minds they will have to wait until next time. Of course, it is understood that if any complication or change in their condition occurs we are to be notified at once. This course of teach-

ing will help them to learn the normal from the abnormal, and will be a great counter-actor for the superstitions and false teachings of the old women and midwives. Did you ever feel as if you wished you had never been born? Well, I've had a feeling akin to that when I have seen one of my obstetric cases in the throes of convulsions, when I had not seen her for three months. Who gets the blame? Nobody but the Doctor. I believe these Ante-Partum clinics will work in the town, in the country, as well as in the city. I believe it will repay us in many ways. Let's get together and start a campaign in South Carolina along these lines and I am sure no one can find a more grateful response than we will receive from the motherhood of the State.

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#### DIABETES A DISEASE OF FAULTY METABOLISM.

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*By G. R. Wilkinson, M. D. Greenville, S. C.*

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It has long been known in a general way that Diabetes Mellitus is a disease due to a faulty combustion of carbohydrates. It has remained however for more recent workers to actually prove this belief by accurate studies. With the advent of more exact and simple chemical methods it has been possible to point out more exactly just where the difficulty lies. Not only has the mechanism for carbohydrate combustion been investigated but also that of the proteins, fats and the general metabolism. The purpose of this paper will be to briefly outline the more recent investigations with a view to broadening the back ground so that the more strictly clinical studies can be more clearly understood and if possible, none of the ground covered twice during this symposium. It will be necessary, however, to outline some of the normal phases of metabolism in order to bring out clearly the various deviations seen in this disease.

Read in the Symposium on Diabetes before the South Carolina Medical Association, Orangeburg, S. C. April 16, 1924.

In the first instance, the general metabolism in the diabetic, that is, the Basal Metabolic Rate has not been shown to be particularly altered (1). Here the rate is usually in line with the diet given and the general state of nutrition of the particular patients who are under-nourished the rate is quite frequently below normal. Further, patients who are sugar-free and, at the same time, are on a high protein diet the rate is usually increased. Where the patient is sugar-free and living on a maintenance diet composed mostly of fats the rate may drop slightly below the normal average. In general, it may be said that the weight lost in this disease is not on account of any increase in the general metabolism but is due to the loss of energy through sugars and ketones excreted in the urine or to underfeeding.

In all forms of life there is constantly at work processes of building up and tearing down. This constant activity is dependent upon certain stimulating agencies. These activating bodies are usually spoken of as ferments, enzymes or harmozones. In animals the activating agencies liberated by the glands which give off a secretion to the blood are called harmozones. The combustion of sugar is dependent upon the presence in the body, of a sufficient amount of a certain specific harmozone. This activating agent is manufactured in the clumps of epithelial cells in the pancreas, known as "The Islands of Langerhans." While this mechanism has long been known it has been but recently demonstrated by Banting (2) that the secretion could be isolated and used in animals when the islands failed to function normally. In the diabetic individual the break-down of carbohydrate metabolism is due to the failure on the part of these so called islands to furnish sufficient "Insulin" for complete sugar oxidation: "Insulin" being the name given to this particular harmozone by its discoverer. When this harmozone is present in amounts insufficient, the sugar in the blood is not broken down as fast as it is assimilated for tissue need and it gradually accumulates. When this ac-

cumulation reaches a point, which varies in different individuals, the kidneys begin to excrete sugar attempting to reduce the level of blood sugar to a point below its particular threshold. This level for the excretion of sugar is not necessarily any lower in diabetics than that found in normal individuals. There is another condition known as "Renal Diabetes" in which the threshold is lowered (3), sugar appearing in the urine when the amount in the blood is not above a level usually considered physiological. The really, fundamental defect in the breakdown of carbohydrate metabolism in the diabetic is due solely to a failure on the part of the pancreas to produce in sufficient amounts its internal secretion. The metabolism of proteins, one might say, is but relatively concerned in diabetes; that is, where the total caloric requirements have been met. Here the usual mechanism remains intact, as has been so clearly demonstrated by the work of Newburg and Marsh (4). However, since the ingestion of proteins throws a large amount of glucose (58% by weight) into the metabolic stream, its presence in the ration of the diabetic assumes real importance. It must be remembered, however, that protein is essential for its nitrogen content and that a sufficient amount must be ingested if the nitrogen equilibrium is to be maintained. Newberg and Marsh (4) have demonstrated that the need for protein in the diabetic is not altered from the normal and that two thirds of a gram per kilo of body weight per day is quite sufficient to maintain a favorable nitrogen balance. Wilder, Boothby and Beeler (5) have shown that protein, on account of its relatively high specific dynamic action, causes an increase in the metabolic rate, thus making its use rather expensive to the general economy of metabolism. Wilder has shown that the use of more protein than is actually needed to meet the nitrogen requirements, exerts a specifically depressive effect on the ability of the organism to utilize glucose and further condemns the excessive use of protein, since it is not as effective as glucose is,



per gram of substance in the prevention of ketosis.

The role of fats in the diabetic is a mooted point. Formerly, it was held that fats should be used with great discretion since they would quickly bring on a complication called acidosis. There is nothing peculiar about the role of fat in diabetes if sugar is being oxidized; it having long been known the fat is burnt only in the flames, so to speak, of combusting carbohydrates.

When sugar is being lost in the urine in large amounts the fatty acids fail to oxidize since they are in turn, dependent upon the oxidation of carbohydrates for their complete combustion. These incompletely combusted metabolites are called ketones. When they reach certain proportions in the blood the acid base equilibrium is disturbed and the carbon dioxide combining power of the blood plasma is reduced. This condition is known clinically as acidosis. It simply means in diabetes that there is an insufficient amount of sugar oxidation going on to burn the fats and that the unburnt fatty acid bodies have accumulated to a point where the acid-base equilibrium is seriously affected.

Shaffer (7) and Woodyatt (8) have studied the carbohydrate fat ratio, that is the amount of available glucose from all sources as compared with the total available fatty-acid content of the food, with a view to calculating the relative amount of starch necessary to burn a given amount of fatty-acid. Their conclusion is that the body can burn 1.5 grams of fatty-acid to one gram of glucose. In the series of cases reported by Newburg and Marsh (9) this ratio is 3 to 1, while Ladd and Palmer (10), in a shorter series, report favorable results with an even greater ratio, namely, 4 to 1. In working out this ratio, the difficulty probably lies in the fact that the part fats play, that is, the glycerol portion of the fat molecule in anti-ketogenesis is not known; and the role of proteins in ketogenesis is also uncertain. Cases have been recently reported by Starr and Fitz (11) in which the reduction of the

plasma bicarbonate was too low to be accounted for by the acids of the ketogenic series found in the plasma. They divide the acidosis cases into two groups: (1) Those in which the reduction can be accounted for by the ketogenic acids and (2) those in which unidentified organic acids play a preponderant part. This unidentified organic acid group also may contribute to the uncertainty of the keto-antiketogenic balance, since it is perfectly possible, if their reports are to be accepted, that the lack or acid-base equilibrium may be, in the greater part, due to other unidentified acid bodies not concerned with the oxidation of fats. Kahn (12) has introduced a fatty-acid of an odd carbon atom variety which he claims is not oxidized by the usual mechanism, that is, by Beta-oxidation, which yields acids not of the ketogenic series, its end product being lactic acid instead of aceto-acetic acid.

#### SUMMARY

1. That the general metabolism as shown by the Basal Metabolic Rate in the Diabetic varies little from the normal when on a maintenance diet.
2. That the carbohydrates fail to oxidize since the harmozone from the pancreas is present in insufficient amounts.
3. That protein metabolism is essentially unchanged.
4. That fats are burnt only when sufficient glucose is oxidized to promote their combustion.
5. That acidosis is due to incomplete fatty-acid combustion and to other unidentified organic acids, which together or separately, bring about a disturbance of the acid-base equilibrium.

#### BIBLIOGRAPHY

1. Wilder, R. M. Boothby, W. M. and Beeler, Carol: Studies of the Metabolism Diabetes, Jour. Biol. Chem., 1922, 29, 97.
2. Banting, F. G. and Best, C. H.: The Internal Secretion of the Pancreas, Jour. Lab. and Clin. Med., 1922, 7, 251.
3. Lewis, D. S.: Renal Glycosuria, Arch. Int. Med. 29; 418 (April 1922.)

4. March, P. L., Newburgh, L. H. and Holly, L. E.: The Nitrogen Requirement for Maintenance in Diabetes Mellitus, *Arch. Int. Med.*, 1922, 29, 97.

5. Wilder, R. M. Boothby, W. M. and Beeler: Studies of the Metabolism of Diabetes. *Jour. Biol. Chem.*, 1922, 51, 311.

6. Wilder, R. M.: Optimal Food Mixtures for Diabetic Patients, *Jour. Am. Med. Assn.* 1922, 78, 1878.

7. Shaffer, P. A.: The Ketogenic Antiketogenic Balance in Man and Its Significance in Diabetes, *Jour. Biol. Chem.* 1922, 54, 399.

8. Woodyatt, R. T.: Objects and Methods of Diet Adjustment in Diabetes, *Arch. Int. Med.* 1921, 28, 125.

9. Newburg, L. H. and Marsh, P. L.: The Use of a High-fat Diet in the Treatment of Diabetes Mellitus, *Arch. Int. Med.* 1920, 26, 647.

10. Ladd, S. W. and Palmer, W. W.: The Use of Fat in Diabetes Mellitus and the Carbohydrate-Fat Ratio, *Jour. Am. Med. Sciences*, 1924, CLXVI, 157.

11. Starr, P. and Fitz, R.: The Excretion of Organic Acids in the Urine of Patients with Diabetes Mellitus, *Arch. Int. Med.* 1924, 33, 97.

12. Kahn, M.: Odd Carbon Fats in the Treatment of Diabetes Ketosis, *Jour. Am. Sciences*, 1923, CLXVI, 826.

## THE PATHOLOGY OF DIABETES

*By Dr. F. H. Dieterich, Professor of Pathology, Medical College of the State of South Carolina, Charleston, S. C.*

In giving you a complete picture of the Pathology of this disease one should go into the pathological chemistry of the carbohydrates. This phase of the symposium, I believe, will be well taken care of by one of the subsequent speakers, so I shall confine myself to the morphological changes alone,

with some references to the pathogenesis of this important disease.

Merring and Minkowski, at an early date, have shown that extirpation of the pancreas was promptly followed by diabetes. This knowledge was gradually augmented so that eventually the specific anatomical structure involved in the pancreas was determined—namely the islands of Langerhans of the internal secretory portion of the gland.

Making use of the knowledge derived from the experiments of workers in this field in years gone by, and aided by the experiences of such investigators as Zuelzer, our Canadian colleagues have given to the world their epoch making insulin. Thus still further demonstrating the fact that there is a close relationship between this disease and the islands of Langerhans.

The part played by such other organs of internal secretion as the adrenal, thyroid and hypophysis is undetermined. It is therefore, upon the lesions in the pancreas that I shall dwell this morning. To be sure we must not ignore the fact that the whole body is affected in this disease of disordered metabolism, so that such lesions as thrombosis, infections e. g. carbuncle; also gangrene, and various pulmonic and gastro-intestinal affections are encountered. Since our time is limited, these secondary pathological manifestations cannot receive any more than passing attention.

Grossly, the organ may show but very little. Fatty and fibrous replacement of part, or the whole organ, is occasionally seen, with a diminution in size.

Microscopically, on the other hand, are found numerous lesions pointing to a disturbance of the carbohydrate metabolism, this is shown for example by the loss of glycogen granules in all tissues, excepting the heart muscle, also in the renal epithelium, in the latter case occurring at times in much larger numbers than normally found.

No lesions accountable for the diabetes are found in the nervous system. Those transitory conditions of glycosurea produced by the pique of Claude Bernard, and simi-

lar central nervous system lesions, are due, most likely, to a mechanical stimulus to the liver, via the sympathetics, liberating large amounts of glycogen.

Here also our chief interest centres about the pancreas. The mere fact that the lesions found in the pancreas are occasionally quite slight would not, in itself, overthrow the assumption that this is the seat of the disease, because changes, functional in character, may have no demonstrable corresponding alteration in the anatomic structure. Hence it is that one may find at autopsy islands of Langerhans in a diabetic that show extreme scarring or complete atrophy, and in another case the islands show no morphological visible change. Between these two extremes all gradations may be found. Researches on these cases, however, have demonstrated in the overwhelming majority of cases, structural changes in the islands, and in many cases lesions in the islands alone. These changes briefly are:

1. Hydropic or serous degeneration.

2. Fibrosis, ranging from a slight intercellular increase of fibrous connective tissue to a dense replacement of the parenchymal cells, even hyalinization.

3. Changes in size, usually an atrophy.

These features and several other points I wish to call to your attention, are best described in conjunction with the lantern slides I have had prepared for this occasion.

#### DEMONSTRATION OF THE LANTERN SLIDES

To sum up, I could do no better than give you the essentials of Allen's conclusions, to wit:

1. The hydropic degeneration of the islands of Langerhans is proved to be a

specific diabetic phenomenon, produced solely by overstrain of the function of the cells by diets in excess of the weakened assimilative power.

2. The rate of the anatomic change varies with the clinical condition, but with unchecked severity of diabetes a period of 4 to 7 days is generally required for development of the first positive vacuolation; maximum vacuolation may be attained in about a month; and in 6 weeks to 2 months all beta cells may have disappeared from the pancreas.

3. The hydropic change is probably reversible within certain limits, and even widely vacuolated cells may probably recover their former size and granulation provided the cell membrane has not burst or the nucleus become too badly degenerated.

4. The demonstration of the nature of the hydropic change is important for the following reasons:

- (a) Its presence affords a positive microscopic diagnosis of active diabetes.

- (b) It completes the proof of the island theory of diabetes.

- (c) It adds to the evidence of the essential identity of experimental and clinical diabetes.

- (b) It explains the permanent lowering of assimilation in diabetes consequent upon excessive diets.

I have several histological sections that actually show lesions in the islands, taken from diabetes, and also normal tissue for comparison, on the microscopes set up.

#### DEMONSTRATION OF SECTIONS ON THE MICROSCOPE OF COMMON DIABETIC PANCREATIC LESIONS



## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

In the Journal of the American Medical Association of Jan. 26, 1924 (Vol. 82, No. 4, p. 265) there is a very interesting article entitled "A Skin Test for Susceptibility of Scarlet Fever" by Geo. F. Dick, M. D. and Gladys H. Dick, M. D. both of Chicago. In this an account is given of the application of a specific skin test on 153 individuals and the results obtained. A Berkfield V filtrate of a streptococcus hemolyticus was used intra-cutaneously in a dilution of 1:1,000. After being tested for sterility and further treated one tenth of a c. c. of this was injected into the skin of the fore-arm. Reactions were classified as negative, slightly positive, positive and strongly positive, ranging in diameter from 2 cm. to more than 3 cm. and differing in the intensity of red and the degree of swelling. The skin reaction was read at the end of 24 hours. The work was done on convalescents from scarlet, persons with a history of scarlet, and those with no history of scarlet. The ages ranged from 12 months to 47 years.

They summarize their findings as follows:

"The filtrate of the culture that produced experimental scarlet fever, when used in the proper dilution gave positive or strongly positive skin tests in 41.6 per cent of the persons who had no history of scarlet fever. All of the convalescent scarlet fever patients tested showed negative, or slightly positive reactions.

The action of the filtrate on the skin was inhibited by convalescent scarlet fever serum.

In two instances in which it was possible to observe the test before and after an attack of scarlet fever, it was positive before the attack, and negative during convalescence.

They conclude that the skin test "bears a specific relation to immunity to scarlet fever."

A further advance in our knowledge concerning scarlet fever is reported by the same authors in a brief but comprehensive account entitled "Scarlet Fever Toxin in Preventive Immunization." This appears in the Journal of the A. M. Asso. of Feb. 16, 1924. (Vol. 82, No. 7, p. 544. In this several experiments are outlined. These were undertaken with a view to the production of an active immunity. It is stated in conclusion that "These experiments show that when persons with positive skin tests for susceptibility to scarlet fever are injected with suitable quantities of the toxic filtrate they may develop a scarlatinal rash with nausea, vomiting, rise in temperature and general malaise."

"The similarity of the symptoms produced by the filtrate to those of scarlet fever, and the resulting modification of the skin test, indicate the production of some degree of active immunity to scarlet fever."

Perhaps it is too soon yet to be quite sure, nevertheless from these and similar writings, we have sufficient basis for the belief that the prevention of this serious malady will soon be on as firm a footing as diphtheria.

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

Case of Aural Discharge Due to Abscess in Throat. Case of abscess of throat discharging through the ear.

A. B. M. age 18 months, was seen at office with a diagnosis of peritonsillar abscess. On second visit the next morning it showed very little bulging and parents were told to keep the child under observation. Not seen again for two and a half weeks, when they returned it was found bleeding from the ear. Examination showed profuse aural discharge coming through inferior wall of external auditory canal. By pressure on swelling below ear and use of capillary suction about two teaspoonfuls of yellow pus was removed from the external auditory canal. On looking in the throat the soft tissues of that side were pushed much forward and in. It was opened the next day with the removal of much pus from the throat abscess.

As to the path of passage of the pus,

there are several views advanced. Dr. Phillips thinks it to be a breaking through an area of lessened resistance, due to insufficient closure of the first branchial cleft. Dr. O'Driscoll believes the pus passed along the fibres of the stylo-pharyngeus muscle, which passes from within outward, or along the lymph vessels. Dr. DeSaussure believes the pus followed the tonsillar vessels to the external carotid and up along external temporal.

Another case (seen in consultation from Surgical Department of Roper Hospital) had a necrosis of the lower jaw with discharge from external auditory canal through its inferior wall, besides a discharge in superior cervical region, so it seems usual for abscess in superior cervical region to discharge through the external auditory canal. But for an abscess of the throat to discharge through the external auditory canal is unusual.

practitioner, it would have been two dollars instead of a thousand.

Our medical society in Orangeburg is rather small compared with the societies in some of the larger places. We have not as many specialists in Orangeburg, although we have some; but Orangeburg is on the map. Orangeburg County and city have been put on the map from a health standpoint by the public health work carried on in Orangeburg in the last seven years. In fact, Orangeburg is one of the first counties that stepped out and said they were willing to buy public health.

On behalf of the Orangeburg County Medical Society, I extend to you a most hearty welcome to the homes and hearts of the people of Orangeburg. We have not the largest hotels, but we have the largest hearted people of any community in Orangeburg County, and the best people of our community have thrown open their homes to entertain the doctors and their wives and give you a comfortable place in which to stay, and I hope those of you who are here who have been contemplating going back home because of lack of room, will change your minds and give us an opportunity to send you to some of our best homes. Again, on behalf of the Orangeburg County Medical Society, I bid you welcome and hope you will enjoy your stay here.

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THE PRESIDENT: The Chair is now pleased to call on Dr. E. C. Doyle, of Seneca, who will respond to these addresses of welcome.

Dr. E. C. Doyle, (Seneca): Mr. President, and gentlemen of the Society. We are assembled in Orangeburg in response to an invitation issued to the Society by the physicians and civic organizations of this city. We wish to thank you for this courteous invitation and for these welcomes extended by your Mayor and by the President of your Medical Society. We find that no false representations have been made to us, for upon our arrival we have

been met with an open hearted welcome by your citizenship, and by the glad hand of hospitality and the cordial grasp of greeting.

It is indeed a great pleasure to be in this pleasant and progressive city, a growing city in the heart of Carolina's agricultural district, and in the very center of the great cotton belt whose fleecy product has brought wealth and prosperity equal to that of the Golden Fleece for which the Argonauts sought, and while this golden stream may be checked by the King of Bugdom, His Royal Highness, the boll weevil, still I believe the day is not far distant when this pest will be overcome, if not entirely eradicated, and the stream will flow in greater volume than ever before. Orangeburg is a striking example of the rapidity with which a city rises to a position of great importance. Only a few years ago, when I visited your city, it was not much more than a straggling village. Upon my return today, I see great signs of industry—tall buildings, towering church spires, shops and expensive business houses, streets crowded with automobiles, crossing and recrossing telephone and telegraph wires, and other evidences of prosperity. This city has evidently seen a great material development, and I trust that you will not allow to follow in its wake those things which usually follow such development of business, that is, industrial warfare and that inhuman monster, greed and selfishness. The city that is built on such a basis soon perishes and passes away. Tyre and Sidon and Babylon are mere bywords, but we still live by the philosophy enunciated at Sparta, and Athens and Jerusalem. Thebes and other ancient cities that grew to their importance through industrial warfare and greed are survived at the present day by a few scattered mud huts; their only commercial assets are their ruined temples and the graves of their dead. The making of a city is the making of its citizens. It is not measured by sky scrapers, but by the life of its men and women. I am thinking



of a city where God is worshipped, where knowledge is important, where virtue is honored, where righteous laws are enacted and obeyed, where wise men rule—not a mythical Utopia, but the Orangeburg of tomorrow.

I would like to urge that the members of the medical profession be not carried off their feet by the scientific discoveries and progress made by our profession, although they have been numerous and great and no man glories in them more than I. But let there be no tendency among us to convert them into a base commercialism and materialism. We must remember that we have chosen that work which is noblest among men, the clergy alone excepted, and that our life work is to be given to the service of God and humanity in the various communities in which we abide. We must also remember that we have engraved on our flag as the emblem of our order, one of the golden admonitions of the old Greek master, "We serve mankind." The immortal Wilson said—let us save the world for democracy. I say to the medical profession, let us save the world for humanity. If we will be true to the service of God and humanity in this field of science to which we have aspired, then I am here to assert most positively that when the revolution of the wheels of time shall confront you with a consciousness of lengthening shadows, when the setting sun turns the evening clouds into a glorious picture across the western horizon, then men will cry out, Behold a man, a lion hearted man, doing all that a man dare to do for the relief of suffering humanity."

THE PRESIDENT: One of the early President of The American Medical Association was Dr. James Moultrie, of Charleston. He was President about 1852 or 1853. At the meeting of the American Medical Association in that year Dr. Moultrie brought the Association to the city of Charleston. We have the honor of having with us today, the

first President of the American Medical Association, who has ever visited this Society since the days of Dr. Moultrie. I wish to present the President-elect of the American Medical Association, Dr. W. A. Pusey of Chicago, who will address you upon the subject, "The Social and Economic Status of the Physician."

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*Dr. Wm. A. Pusey, of Chicago, President Elect American Medical Association.*

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I am very much obliged for your cordial welcome. It is a pleasure to be with you. I feel a good deal at home down here, and it is really a great satisfaction to get back where one may be a Democrat without being on the defensive. I have spent three wonderful days in South Carolina. I have been enjoying your beautiful city and I have been enjoying the courtesy of the hospitable people. I have found a few things here to surprise me—three things that I wish to mention. The first is a county medical society that has such influence in its community that it owns the Public Charity Hospital. That is the situation, I am told, at Charleston, and I believe it is a unique situation in the United States. I find that here in this medical society the society has charge of the licensing of practitioners in this state, and that it also has charge of the public health work of the state—that these things are delegated by the State to the State Medical Society. These facts, I believe, are almost, if not unique, certainly very rare. I want to congratulate you on this state of affairs. I am glad to know of a society which has so much influence with the public.

I am glad to bring you the greetings of the American Medical Association. We are getting along as well as usual, I think. We have our difficulties and our troubles, but altogether I should say that the Association is getting along well. It is no exaggeration to say that we are vastly interested in the success of such meetings as this. We realize that the Association is only as

strong as its constituent bodies, and that more important by far than the American Medical Association is the health and vigor of the State Medical Society, and most important of all is the health and vigor of the County Medical Society.

The Secretary read a telegram from Dr. Joseph Colt Bloodgood, of Baltimore, stating that owing to a delayed train he had missed his connections and would be unable to attend this meeting.

### SYMPOSIUM ON DIABETES:

Dr. F. H. Dieterich, Charleston, read a paper entitled "Pathology of Diabetes."

Dr. G. R. Wilkinson, Greenville, read a paper entitled "Metabolism in Diabetes, or Diabetes a Disease of Faulty Metabolism."

These two papers were discussed by Dr. Hugh Smith, Greenville.

Dr. J. Heyward Gibbes, Columbia, read a paper entitled "General and Special Therapy of Diabetes." This paper was discussed by Dr. Robert Wilson, Jr., Charleston.

Dr. N. B. Heyward, Columbia, read a paper entitled "The Prevalence and Diagnosis of Diabetes."

Dr. R. Lee Sanders, Memphis, Tennessee, read a paper entitled "Surgery in the Diabetic." This paper was discussed by Dr. G. R. Wilkinson, Greenville.

The discussion of the above papers was closed by Drs. J. Heyward Gibbes; N. B. Heyward, and R. Lee Sanders.

The session adjourned until three o'clock.

### WEDNESDAY AFTERNOON SESSION

The Wednesday afternoon session was called to order at three-fifteen by the President, Dr. L. O. Mauldin.

Dr. N. Bruce Edgerton, Columbia, read a paper entitled "Surgery of the Prostate, Recent Advances." (Lantern Slides This paper was discussed by Drs. C. A. Mobley,

Orangeburg; George T. Tyler, Jr., Greenville; M. H. Wyman, Columbia; Gideon Timberlake, Greenville; and the discussion closed by Dr. N. Bruce Edgerton.

Dr. Edward F. Parker, Charleston, read a paper entitled "Prenatal Sight and Hearing as Factors in the Child's Destiny." This paper was discussed by Drs. J. W. Jervey, Greenville; James A. Hayne, Columbia; and the discussion closed by Dr. Edward F. Parker.

Dr. C. C. Craft, Florence, read a paper entitled "Blood Chemistry." There was no discussion of this paper.

Dr. H. W. Rice, Columbia, read a paper entitled "The Treatment of Cicatricial Diseases of the Esophagus by the Retrograde Method." This paper was discussed by Drs. Julius H. Taylor, Columbia; F. M. Durham, Columbia; and the discussion closed by Dr. H. W. Rice.

Major N. W. Grant, U. S. A., was introduced by Lieut. Col. C. B. Earle of Greenville, and made an address on "Our Obligation as Physician and Citizen." This paper was discussed by Drs. C. W. Kollock, Charleston; C. B. Earle, Greenville, and the discussion closed by Major N. W. Grant.

Dr. F. M. Durham, Columbia, read a paper entitled "Office Treatment of Diseases of the Anus and Rectum." This paper was discussed by Drs. H. W. Rice, Columbia; D. L. Crosson, Leesville; J. R. Young, Anderson; John Young, Columbia; W. M. Bevis, Columbia, and the discussion closed by Dr. F. M. Durham.

Dr. William Weston, Columbia, read a paper entitled "Newer Problems in Nutrition." There was no discussion of this paper.

Dr. M. H. Wyman, Columbia, read a paper entitled "Urology in its Relationship to Other Special Branches of Medicine and Surgery." This paper was discussed by Drs. Robert Wilson, Jr., Charleston; George Bunch, Columbia; F. D. Rodgers, Columbia, and the discussion closed by Dr. M. H. Wyman.

Dr. William A. Boyd, Columbia, read

a paper entitled "The Management of Supra-Condylar Fractures of the Humerus." (Lantern Slides) This paper was discussed by Drs. George Rodgers, Columbia; and Davis Furman, Greenville.

Dr. P. V. Mikell, Columbia, read a paper entitled "Vincent's Angina." This paper was discussed by Drs. S. B. Fishburne, Columbia.

On motion, duly seconded, the balance of Wednesday's program was carried over to Thursday morning and the session adjourned.

#### THURSDAY MORNING SESSION

The Thursday morning session was called to order at nine-fifteen by the President, Dr. L. O. Mauldin.

Dr. J. Richard Allison, Columbia, read a paper entitled "Modern Dermatology." This paper was discussed by Drs. Rodger G. Doughty, Columbia; R. Lee Sanders, Memphis, Tennessee.

Dr. W. H. Higgins, Richmond, Virginia, read a paper entitled "A Consideration of the Underactive Thyroid." There was no discussion of this paper.

Dr. A. E. Baker, Charleston, read a paper entitled "Significance of Gastric Hemorrhage." This paper was discussed by Drs. R. Lee Sanders, Memphis, Tennessee; F. M. Durham, Columbia; W. A. Wallace, Spartanburg, and the discussion closed by Dr. A. E. Baker.

At this time Dr. G. T. Tyler, Charleston, offered the following resolution:

WHEREAS, The South Carolina Medical Association has been cordially received and delightfully entertained, not only by the Orangeburg Medical Society but by the entire community;

"BE IT RESOLVED, that we express our appreciation of this hospitality by a rising vote of thanks, and request that our Secretary so inform the County Society and the Mayor of Orangeburg."

On motion, duly seconded, this resolution was unanimously adopted.

#### SYMPOSIUM ON OBSTETRICS AND GYNÉCOLOGY:

Dr. L. C. Shecut, Orangeburg, read a paper entitled "Ante-Partum Care—What should be Routine and is Possible to Offer."

Dr. G. Fraser Wilson, Charleston, read a paper entitled "Special Points in the Dilivery of Normal Cases.

(Use and Abuse of Cathartics, Douches, Pituitrin, H. M. C.)

Dr. Wythe Rhett, Charleston, read a paper entitled "Neo-Natal Care. The Baby-Nursing Hours, Clothing, Drugs."

Dr. G. T. Tyler, Greenville, read a paper entitled "Gynecologic Contributions to Obstetric Difficulties."

Dr. Lester A. Wilson, Charleston, read a paper entitled "Diagnosis and Treatment of Placenta Previa."

The above papers were discussed by Drs. R. M. Pollitzer, Charleston; G. Fraser Wilson, Charleston; L. A. Wilson, Charleston; N. Bruce Edgerton, Columbia; W. T. Lander, Williamston; J. G. Wannamaker, Orangeburg; and the discussion closed by Drs. L. C. Shecut, G. Fraser Wilson, Wythe Rhett, and G. T. Tyler.

Dr. E. L. Horger, Columbia, read a paper entitled "A Brief Consideration of the Psychoneuroses." This paper was discussed by Dr. W. M. Bevis, Columbia, and the discussion closed by Dr. E. L. Horger.

#### THURSDAY AFTERNOON SESSION

The Thursday afternoon session was called to order at two-thirty by the President, Dr. L. O. Mauldin.

Dr. Roger G. Doughty, Columbia, read a paper entitled "Congenital Pyloric Stenosis." This paper was discussed by Drs. E. L. Barron, Manning, R. M. Pollitzer, Charleston, and the discussion closed by Dr. R. G. Doughty.

Dr. W. M. Bevis, Columbia, read a paper entitled "The Importance of Early Symptoms in Mental Diseases." This paper was discussed by Dr. J. M. Beeler, Columbia, and



the discussion closed by Dr. W. M. Bevis.

Dr. H. S. Black, Spartanburg, read a paper entitled "Benign Tumors of the Small Intestine Causing Intussusception." This paper was discussed by Dr. A. E. Baker, Charleston.

Dr. R. M. Pollitzer, Charleston, read a paper entitled "Preventive Pediatrics." This paper was discussed by Dr. M. W. Beach, Charleston, and the discussion closed by Dr. R. M. Pollitzer.

Dr. R. W. Sease, Kingstree, read a paper entitled "Recent Epidemic of Gastrointestinal Manifestations." This paper was discussed by Drs. T. R. Littlejohn, Sumter; R. M. Pollitzer, Charleston; A. L. Ballenger, Wagener, and the discussion closed by Dr. R. W. Sease.

The meeting adjourned.

*Sine die*



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## NEWS ITEMS

Reports received from Colleton County indicate that the Colleton County Medical Society has been very active recently under the Presidency of Dr. Stokes.

The Esdorn Infirmary at Walterboro has been very helpful in stimulating the scientific treatment of patients in Colleton County.

The South Carolina Medical Association now owns a splendid lantern which was used for the first time at Orangeburg with admirable success in illustrating the papers presented.

The wide publicity given recently to the Medical Reserve Corps of the United States Army has greatly promoted applications for appointment on the part of the profession in this state. Lieutenant Colonel C. B. Earle of Greenville is Chairman of the Committee for the Association.

Periodic Health Examinations are interesting more of the physicians of the state and it is found that the public is demanding from the profession this very important service. Blanks may be secured from the A. M. A. headquarters at Chicago.

The Baby Health Truck of the State Board of Health has been a big asset to the work of the Board in the various Counties. The truck is now operating in the Piedmont section.

Dr. William A. Boyd of Columbia is the Orthopedist of the State Board of Health and since the appropriation of five thousand dollars by the recent legislature for the treatment of indigent crippled children of the State Dr. Boyd's department has been very much enlarged.

The Secretary-Editor has received an invitation to the Testimonial Banquet in honor of Dr. George H. Simmons Editor and General Manager of the American Medical Association who asks to be retired at the age of seventy three.

The A. M. A. will meet at Chicago this year. The completion of the new addition to the headquarters building and its splendid auditorium is an epoch long looked forward to. The House of Delegates will meet there.

The Southern railway has recently put on a Pullman direct from Columbia to Chicago. This information may prove worthwhile to some of the members contemplating attending the A. M. A. meeting. Mr. R. C. Cotner, District Passenger Agent, Spartanburg, S. C., will supply further details.

The Woman's Auxiliary of the State Medical Association promises great development under the Presidency of Mistress Vance Brabham of Orangeburg. Oconee County has recently organized an enthusiastic society with Mistress E. C. Doyle of Seneca President. Other societies are rapidly falling in line.

Dr. R. G. Beachley Health Officer of Dillon County and Secretary Treasurer of South Carolina Public Health Association has been putting Dillon on the map recently as a public health unit. Dr. Beachley is also active now in promoting the State Public Health Association and desires to receive application for membership. This is a wonderful organization now and should be encouraged.

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The innocuousness of the finished material is then demonstrated by the injection of a given quantity beneath the dura of rabbits and subcutaneously in guinea pigs and mice. Sterility tests are likewise made, to insure freedom from bacteria. The product is standardized by weight so that 2 cc of suspension (the contents of one of the syringe containers) will contain sufficient material for one injection (one dose) for an adult.

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## BOOK REVIEWS

**DOSAGE AND SOLUTIONS.** A Text-Book Nurses and a Reference Book for Physicians and Nurses. By C. E. Garnsey, Instructor in Anatomy, Physiology, Hygiene, Bacteriology, Dosage and Solutions, Hydrotherapy, and Chemistry in the Washington Sanitarium and Hospital Training School for Nurses, Washington, D. C. Philadelphia and London. W. B. Saunders Company, 1924.

**THE SCIENCE AND ART OF ANESTHESIA.** By Colonel William Webster, D. S. O., M. D., C. M. Professor of Anesthesiology, University of Manitoba Medical School; Chief Anesthetist, Winnipeg General Hospital; Formerly Professor of Practical Pharmacology, University of Manitoba Medical School; Demonstrator of Practical Physiology and Chemical Physiology, University of Manitoba; Pathologist, Winnipeg General Hospital, Winnipeg, Canada. Illustrated, St. Louis. The C. V. Mosby Company, 1924.

**THE TREATMENT OF THE COMMON DISORDERS OF DIGESTION.** A Handbook for Physicians and Students. By John L. Kantor, Ph. D., M. D. Chief in Gastrointestinal Diseases, Vanderbilt Clinic, Columbia University; Associate Gastroenterologist and Associate Roentgenologist, Montefiore Hospital for Chronic Diseases, Illustrated.

**THE SURGICAL CLINICS OF NORTH AMERICA.** February, 1924 Volume 4—Number 1 Philadelphia Number. Philadelphia and London. W. B. Saunders Company.

**THE CIRCULATORY DISTURBANCES OF THE EXTREMITIES, INCLUDING GANGRENE, VASOMOTOR AND TROPHIC DISORDERS.** By Leo. Buerger, M. A., M. D., New York City. With 192 Illustrations Five in Colors, Philadelphia and London. W. B. Saunders Company.

**OPERATIVE SURGERY.** Covering The Operative Technic involved in the operations of general and special surgery. By Warren Stone Bickham, M. D., F. A. C. S. Former Surgeon in charge of General Sur-

gery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5400 pages with 6378 illustrations, mostly original and separate Desk Index Volume. Volume 3 containing 1001 pages with 1249 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free. This is one of the most elaborately illustrated publications ever published. There are other valuable contributions to operative surgery besides the actual technique of the operation itself, such as the aseptic and antiseptic precautions and the choice of an anesthetic. In this volume operations on the head and chest are mainly considered.

**DIFFERENTIAL DIAGNOSIS.** Presented through an Analysis of 317 cases. By Richard C. Cabot, M. D. Professor of Medicine and Professor of Social Ethics at Harvard University, Volume 2—Third Edition, Revised. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, 9.00 net.

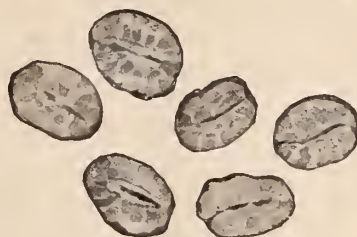
The cases remained unchanged in this edition but the introductory discussions have been enlarged upon very greatly especially the section on abdominal and other tumors.

**ABT'S PEDIATRICS.** By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totalling 8000 pages with 1500 illustrations, and separate Index volume free. Now ready—Volume III containing 1051 pages with 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1924 Cloth, \$10.00 per volume. Sold by Subscription.

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**THE CARE OF THE BABY.** A Manual for Mothers and Nurses, containing practical directions for the Management of Infancy and Childhood in Health and Disease. By J. P. Crozer Griffith, M. D., Professor of Diseases of Children in the University of Pennsylvania. Seventh Edition Thoroughly Revised. 12mo of 478 pages with 104 illustrations. Philadelphia and London: W. B. Saunders Company, 1923. Cloth, \$2.50 net.

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# The Journal

OF THE

## South Carolina Medical Association

VOL. XX.

GREENVILLE, S. C., JUNE, 1924

NO. 6

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# South Carolina Medical Association

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## EDITORIAL

### NOTES ON A. M. A. MEETING

The Secretary-Editor attended the 75th annual meeting of the American Medical Association at Chicago, travelling via the Southern Railway on the new Pullman put on the Carolina Special from Columbia to Chicago. On this train we were delighted to find Dr. and Mrs. R. W. Gibbs of Columbia on their way to Alaska. Dr. Gibbs and his wife have travelled extensively, and this trip we hope present in a write-up by Dr. Gibbs on his return.

The A. M. A. surpassed all records in every way at its Diamond Jubilee meeting this year. The House of Delegates wrought fundamental legislation for the welfare of the individual practitioner along many lines. First of all was the evident desire to stabilize

the Family Physician and uphold his independence. The ground work is being laid, and indeed much has already been done towards this end.

Medical Education came in for a large share of the discussion. Efforts will be made by cooperating with the National Educational Association to shorten the time in which a student may acquire a medical education, and begin his life work. Post Graduate medical education will be carried by the A. M. A. in time to the physician on the firing line. Post Graduate medical schools in the large centers have been greatly improved.

Periodic health examinations were urged to be done by the family physician rather than by commercial enterprises.

The A. M. A. loses the active leadership

of two of the greatest men in American Medicine, Dr. George H. Simmons, the General Manager and Editor, and Dr. Frank Billings, Secretary of the Board of Trustees. Both of these gentlemen requesting to be retired. Dr. Simmons witnessed the completion of the wonderful Headquarters Building which has no equal anywhere in the world.

The South came in for its full share of honors. The Secretary Dr. Olin West who will become acting General Manager, and the President-Elect Dr. Haggard are both from Nashville, Tenn.

The commercial and scientific exhibits were extraordinary in their scope and interest. The scientific program was complete in every detail, and approximately eight thousand doctors attended the various meetings. We were delighted to note the leadership of Dr. Kenneth M. Lynch now of Dallas, Texas formerly of Charleston, Chairman of the section on Pathology and Physiology. He brought the attendance of his section up from twenty-five or thirty to from five to seven hundred simply by an unusually good program backed up by essayists of national reputation.

Among the South Carolina Doctors present were Dr. J. W. Jervey of Greenville, Dr. James A. Hayne of Columbia; both of whom were on the program, Dr. F. B. Johnson of Charleston, Dr. R. H. McFadden of Chester; Dr. C. O. Bates, Greenville; Dr. N. D. Clark, Spartanburg; Dr. Davis Furman, Greenville; Dr. J. W. Parker, Greenville.

The Secretary-Editor served in the House of Delegates on the committee on Rules and Order of Business.

The Association will meet at Atlantic City next year.

---

#### SERVICE OF THE SECRETARY-EDITOR APPRECIATED BY THE A. M. A.

The Secretary-Editor is indeed grateful for the complimentary remarks in the May issue of the *American Medical Association Bulletin*. To be able to render some little

service to the medical profession of South Carolina, and of America has been the one ambition of the Secretary-Editor.

---

#### "SERVICE IN THE HOUSE OF DELEGATES."

"In looking through records of members of the House of Delegates of the American Medical Association a card comes to light which shows that one gentleman has served his state association and the national organization in this body for a continuous period of fourteen years. He has been on some one of the various reference committees at every session and always has taken his duty as a member of the House very seriously, giving willing and valuable service. And the Gentleman from South Carolina will be on hand again this year, God willing! We salute him!"

---

#### DEATH OF DR. J. L. NAPIER

The death of Dr. J. L. Napier of Blenheim removes from our midst a physician who for at least a quarter of a century was a very prominent figure in the South Carolina Medical Association. Dr. Napier served as President of the South Carolina Medical Association, but perhaps his greatest service was as a member of the State Board of Medical Examiners, where for nearly twenty years, indeed a large part of his professional life, he gave of his strength and wisdom.

The tributes of the public press indicate that Dr. Napier was of the highest type of the family physician, and that he was a success as a business man and citizen.

---

#### DEATH OF DR. C. M. WALKER

The profession of Oconee County has lost one of its most valued members in the death of Dr. C. M. Walker of Westminster. Dr. Walker was a successful physician, a splendid business man, being always interested in the best interests of the community in which he lived. He was loyal to his church, he was patriotic, and an all around high-toned gentleman.

## ORIGINAL ARTICLES

### SPECIAL POINTS ON THE DELIVERY OF NORMAL CASES

*By G. Fraser Wilson, M. D., Charleston, S. C.*

Prenatal care, while better in South Carolina than in years gone by, is, I believe, among the rank and file of the profession, distressingly poor. This is surprising as it is so well known what appalling disasters may occur during pregnancy and labor, which can be prevented and which injure a physician's reputation. I would suggest as an axiom 'that a physician who is so busy that he cannot properly care for his obstetrical patients should leave obstetrics alone.'

Three or four weeks before delivery a thorough examination should be made and the pelvic measurements estimated in primiparous women and those with a history of difficult labor.

More and more, as I gain experience, I value inlet measurements less, except that they demonstrate the probable character of the labor.

The transverse measurement of the outlet is easily made and if narrow will cause a severe distocia. It is met in connection with numerous types of pelvic deformity and is known as the funnel pelvis. I mention it because it is often seen in strong, healthy women who apparently have no pelvic deformity. If the closed fist is placed between the Ischial Tuberosities and rocked up and down one can tell fairly well that there is contraction.

A vaginal and an abdominal examination should be made to determine or rule out any abnormalities such as tumors, exostoses, atresias, agglutination of the uterine

orifice and to diagnose position and presentation. As the head is the best pelvimeter, while making the vaginal, press it down into the pelvis to see if it fits or overlaps, which is the only reliable means that I know of to get this information. The X-Ray is unreliable and sometimes misleading.

Strange as it may seem, I will caution you to be sure that the patient is pregnant. Nothing is more embarrassing than to be called in the absence of her physician to care for a woman, expecting soon to be delivered, and to have to tell her that no pregnancy exists.

#### THE DELIVERY

The main points in a delivery are to give the patient the required time and to maintain a rigid technique of cleanliness. Shaving is a necessity, more even during the puerperium than at delivery in order to keep the parts sterile and the patient comfortable. An enema, if labor is not too far advanced, properly given and repeated every 8 hours, will empty the rectum thoroughly and prevent infection of the field at delivery. It is inexcusable for fecal matter to be present if the patient is prepared properly. No educated physician today uses a douche, during or after labor; the risk is too great; the normal lubrication of the vagina is removed and no gain attained except that when very hot it acts as an oxytoxic, a result gotten just as well by hot enemata.

Cheerful assurance, accompanied by the encouragement that she is progressing normally, staying by her side and teaching her how to use her pains are valuable in maintaining morale.

She should be examined as seldom as possible and always with a gloved hand. One, sometimes two, and only when complication is suspected, three examinations should be sufficient. These are best made rectally,



a method that is safe and one that you can teach your nurse to do. A vaginal examination is perhaps more satisfactory to most men. It requires a surgically clean hand, but, as it always increases the risk of infection, should be made as seldom as possible. Lubrication of the fingers is entirely unnecessary.

Valuable points to be observed early in the labor are: The mother's temperature, which knowledge may be of value later on in the lying-in period; the mother's pulse and the foetal heart. A rising pulse indicates exhaustion in the mother. With unruptured membranes the foetal heart is counted every one or two hours. If ruptured, every 45 minutes. A baby's condition is always shown by its heart sounds.

The object of all is to bring about delivery as quickly as possible, but in a manner that is safe for mother and child, and to do this with a minimum of pain. This desideratum is obtained by the skillful, scientific expert, with instruments, or by version; or by the unskillful, inexperienced, fearless practitioner with Pituitrin, H. M. C., Twilight Sleep, or, worse, by instruments with no thought of the injury to mother or child.

Fortunately, the majority of physicians are willing to give nature the time she should have.

Many drugs hasten labor. The chief of these is Pituitrin. When Blair Bell discovered its action he gave us both a blessing and a curse. It has little place in delivery until the second stage is over. As Bell expressed it to me, "It's role is to stop hemorrhage." Pituitrin in small doses of 2 minims every half hour for three or four doses, in combination with castor oil and quinine, to induce labor, as Watson has demonstrated, and occasionally at the end of second stage, with the cervix fully dilated, but labor not advancing, is valuable. There is required so much obstetrical knowledge, as correct pelvimetry, correct diagnosis of presentation and position, histories of previous labors, no renal or cardio-vascular disease, and as

there is present always the risk of uterine relaxation and post-partum hemorrhage, these facts cause me to feel as DeLee does, that it would be wise to put the drug under some form of restriction, such as the Harrison Act.

I have seen a woman bleed to death in the twinkling of an eye following its use; two ruptured uteri; a child lost because of the tonic contraction at the placental site, and a severe hour-glass constriction, with retention of the placenta. It is a bad drug to use unless you know what you are doing. Its valuable use is in the third stage to stop bleeding.

The means that are used to alleviate pain are the Dammer Schaft (Twilight Sleep), Hyocin, Morphine, and Cactin (H. M. C.), Nitrous Oxide and Oxygen, Chloroform, and Ether.

Spinal anesthesia and cocain application to the cervix have not proven satisfactory, and all, with the possible exception of Chloroform and Ether, will prolong the second stage.

Three hundred cases of Twilight Sleep convince me that while it may be ideal for the mother, it is very dangerous to the child. They are born orthopneic, blue and as stiff as a board. Hemorrhage, delayed labor, and instrumentation on a narcotized child are the added risks. Twilight Sleep and H. M. C., which is only another method of a similar type, I have long since discarded, reserving them for the rare case of an extremely hysterical woman, frightened to death, who will not listen to sense or reason.

The time to relieve pain in labor is when the second stage has begun, unless the woman has become exhausted. If this occurs there is nothing that gives the brilliant result or burnishes the silver lining of her cloud of anguish as does morphine, hyperdermatically. The tired uterus is given new strength, and the hard, thick, cervix softens. Interference is not allowed under four hours because of the danger of delivering a narcotized child.

When the second stage has arrived, and

that means full, complete dilatation of the cervix, the time has come to alleviate suffering and it is done with nitrous-oxide, chloroform, or ether. The anesthetic should be given by an expert who knows just how much to give.

My management of the second stage is to take my patient to the delivery room when fully dilated, paint the lower abdomen, buttocks and vulva with a 1 to 4 tinct. iodine, and drape her in sterile goods. Give her a few whiffs of the anesthetic with each pain, until she reaches the condition of twilight anesthesia, and then rupture the membranes. As the presenting part gets closer to the perineum the anesthetic is increased until pains cease. I then use the Potter Method of ironing the perineum, starting with one finger, massaging the posterior wall of the vagina from the cervix to the out-let. Two fingers are then introduced, three, four, and finally the whole hand. The anesthetic is removed until pains return. Very soon the presenting part appears, and if it be the occiput, with my right hand covered with a sterile towel, I catch the chin back of the rectum, shoving the occiput upward and outward, pressing it downward at the same time with the finger of my left hand to get the shortest diameter of the child's head through the vulva. With this method, second degree tears seldom occur. The perineum returns in place in 24 hours.

If the woman has a posterior position, or is suffering severely, and making little progress, I apply instruments. Tarnier's Axis Tractor, if the head is high; Tucker-McClane solid blades, if the head is low. Scanzoni's rotation is done if a posterior, and ordinary traction if it be an anterior position. If it is a breach, I get one foot and deliver after Potter's method, applying the forcep to the after-coming head, should it not deliver after one or two attempts.

This second stage management is not what I teach beginners, nor do I advise you to use forceps unless you know that you have the required skill to use them, causing

no injury to the mother or child, and particularly not to attempt the version until you have done at least 100 ordinary ones. Unquestionably, if you can do this work in this manner, you save untold suffering and relieve the woman of the dread of another labor.

Among the main points of the management of the third stage, is to give pituitrin as soon as the child is born, which shortens the stage and saves the mother's blood. The placenta is not delivered until it separates, except in the face of hemorrhage. Fifteen or twenty minutes is all that is required for placental separation, and it is a good idea to repair the perineum during this time. Pack the vagina with a small boston roll and repair. I seldom do an episiotomy and reserve it for the occasional large primiparous breach or the elderly primipara with a rigid perineum. I think the median is better than the lateral type. I use No. 2 chronic cat-gut, internally, and silk-worm gut externally. I frequently do a subcutaneous repair with cat gut, no stitches going through the skin or mucous membrane. These heal quickly, with no pain or cutting. When the cord is cut, catch a little of the infant's blood on an instrument and watch its clotting time. If four or five minutes, it is normal; if ten, watch closely for signs of bleeding in that baby, and save it by giving whole blood intraperitoneally.

The fundus should be held until firm. This may take a few minutes or an hour. Watch the pulse and flow and remain near your patient for two hours.

I realize that I have left much unsaid. One could write a tome upon the subject, but I have only tried to bring out points that I hope will be of value.

In conclusion, I would like to say that as one of the first in the South to turn my babies over to the Pediatrician as soon as the cord is cut, I am satisfied with the wisdom of doing so and want to thank them for the great progress they have made during the last few years in saving the little lives, due chiefly, I believe, to early and proper feeding.

## "PRENATAL SIGHT AND HEARING AND EDUCATION OF THE UNBORN."

*By Edward F. Parker, M. D., Charleston, S. C.*

As a prelude to my own remarks, I am glad to make the following quotations from a letter received from my gifted friend, Thomas R. Waring, Editor of *The Charleston Evening Post*, thanking me for sending him a copy for his perusal in advance of the meeting.

"Perhaps the idea is not altogether fantastic. There is something of it in a theory which certain philosophers and psychologists are advancing in an endeavor to explain the persistent myth of a 'Golden Age' in the early life of the race. It is called the 'Theory of Intra-uterine Blessedness,' and it holds, according to a writer whose book on 'Pagan and Christian Creeds,' I have recently read 'That in the minds of mature people there still remain certain vague memories of their prenatal days in the maternal womb—memories of a life which, though full of growing vigor and vitality, was yet at that time one of absolute harmony with the surroundings, and of perfect peace and contentment, spent within the body of the mother—the embryo indeed standing in the same relation to the mother as St. Paul says we stand to God,' in whom we live and move and have our being, 'and that these vague memories of the intra-uterine life in the individual are referred back by the mature mind to a past age in the life of the race.'"

Dr. J. W. Jervey of Greenville with his engaging eloquence that points us to the skies and leaves us in the clouds, and Dr. J. Adams Hayne of Columbia, an ardent advocate of "More and Better Babies," peculiarly fitted to illumine the subject, have kindly consented to open its discussion.

Sometime ago, at the Roper Hospital, I

saw, for the first time, a large child untimely ripped from its mother's womb by Caesarian Section, instead of passing through the historic pudendal arch. The thought passed through my mind then that it might have seen and heard before birth. Since then the idea has been fascinating.

The possibility of the child in utero hearing and seeing is not as improbable as at first glance it may seem. Air, water and solids are conductors of sound—the foetus is surrounded by them, and there is no reason why it should not hear. As to the ability of the eyes to function, I am not so sure, tho' we know that it is possible to visualize things with the lids closed and to see in water and through tears.

After reading and studying laboriously the methods used by Mark Twain in determining the dying words of such famous characters as Cleopatra, Mark Antony, Caesar and Napoleon; those used by Sir Conan Doyle in convincing himself that he could converse with departed spirits hovering about us anxious to communicate with friends, relatives and acquaintances still in the land of the living and those employed by the Modernists in Religion in proving that Daniel in the Lion's Den was only saved by wearing green goggles and carrying a green umbrella—I determined to try and talk with the unborn child.

Knowing the principles of telegraphy and the theories of sound transmission, I learned the foetal language by registering on a revolving drum the impulses of the quickening kicks. Interpreting these by standard code systems, I have been able to convince myself that communication with the child in utero is feasible and practical.

My researches make such voluminous case records that I will not fatigue you by reading them. Suffice it to say they are in fire-proof safes for protection and easily available to those interested.

I give you, my colleagues, the first glimpse of the rosy dawn of a discovery which in its far reaching possibilities and far-flung



speculations may in my opinion, be compared to Rome that sat upon her Seven Hills and from her Throne of Glory ruled The World.

I must ask you not to accept it however on merit alone but also on Faith. By Faith I mean that intangible, invisible, immeasurable something, "The evidence of things unseen, the substance of things hoped for," that made men and women meet death with a smile, closed the mouths of lions and chilled the heat of burning fiery furnaces; made Zachias empty his pockets of ill-gotten gold, and Job a synonym of unwavering loyalty and patience; sent Paul of Tarsus, safely, thousands of miles by land and sea, on the most marvellous and perilous journeys the mind of man had conceived; sent Columbus across the Ocean Blue, and still remains the mightiest force in the world today.

My friends, the significance of this discovery almost passeth all understanding. In my experiments, I have not yet touched the inexhaustible mine of instruction offered by such modern inventions as the Phonograph and the Radio which may easily reach the unborn child before it commences its individual existence to fight life's fitful fever.

"Ill fares the land  
To hastening ills a prey"  
When wealth accumulates  
And the child deteriorates.

Think of it! When every unborn child hears and sees only what is uplifting, then Righteousness cannot perish from the earth and Civilization like a green bay tree, will flourish forever.

#### DISCUSSIONS

DR. J. W. JERVEY (Greenville):

Some two or three weeks ago I was favored with a very interesting communication from our distinguished friend, Doctor Parker, on a subject entirely foreign to the paper which he has just presented, but casually remarking at the close that he intended to read a paper before this august assemblage with the title which we have just heard read. At first I thought it was a little facetious play, and with that in mind I replied that on a hurried reference to the literature on the sub-

ject I found it to be so voluminous, so tremendous in its interest and its import, that with the short space of time allotted to me his invitation was entirely too late to enable me to separate the wheat from the chaff; but that after all I supposed what he wanted me to discuss was the chaff. Of course, Mr. Chairman, you and our friends and colleagues realize that this subject which has been brought up by Doctor Parker is one which is essentially and irrevocably intertwined with the theory of the pre-existence of the ego, which has been so beautifully expounded by Babot in the early days of civilization, and also the old problem of the non-existent as opposed to what," expounded by Catalinus Magnus at Borsolino somewhere about B. C. or if not B. C. then prior to that time. I much fear that Doctor Parker is following a false light, going after false gods, visualizing something which does not exist. Also, Mr. Chairman, I wish to criticize his paraphrasing Goldsmith's.

"Ill fares the land, to hasten'ng ills a prey,  
Where wealth accumulates and—the child  
deteriorates."

I think he should have used the original, "Where wealth accumulates and men decay." I fear that this marks the commencement of the decay of the brilliancy which we have been accustomed to associate with Doctor Parker. We used to think of him in those other words from *The Deserted Village*:

"And still he talked and still the wonder  
grew,  
How one small head could carry all he  
knew."

On the whole I feel that no more just retribution, no finer example of heaping coals of fire could be brought about than by quoting this poem from a paper read by the essayist two years ago, that paraphrase of Timrods beautiful composition:

"Bunk in the whirling marts;  
Bunk where the scholar thinks the hunter  
rooms;  
Bunk, bunk in all our hearts,  
And bunk in all our homes."

I would like to close, however, as he did, with the words of the brilliant author of those lovely stories, "Master Skylark," and "Madame Margot:"

"We are all but fellow-travelers  
Along life's weary way;  
If anyone can play the pipes,  
In God's name let him play!"

Thank God, Doctor Parker has the pipes to play.

DR. JAMES A. HAYNE (Columbia):

When I received a letter from Doctor Parker asking me to discuss this profound paper I thought I was unworthy of the honor of being a co-worker in setting before this assemblage so wonderful and astounding a scientific discovery. I think probably Jacob had some idea of this when he peeled the rods in order that he might have ringed, streaked and striped cattle.

I do not wish to inject any levity into this discussion. We live in an age of discovery. If we listen perhaps we can hear someone crying, perhaps a little child crying to be born into this world, to see the sights and hear the sounds that Doctor Parker has so aptly described—sounds it can hear while in harmony with its surroundings. I feel unable to refer to the literature or quote the poems that my two predecessors have done. I can only say that I stand aghast to think of what these infants may see and hear.

DR. EDWARD F. PARKER (Closing):

I only want to thank the two gentlemen for discussing the paper so brilliantly and to tell the Association that I knew they would do so when I asked them. The subject was particularly suited to Doctor Jervey's style of oratory, and I knew it would interest Doctor Hayne on account of his experience with children.

### DIABETES MELLITUS: ITS PREVALENCE AND DIAGNOSIS

By N. B. Heyward, M. D., Columbia, S. C.

Diabetes is increasing in frequency in the registration area in the United States. The Bureau of the Census in Washington gives the death rate of Diabetes as 10.4 100,000 of population in 1900, as 16.6 in 1910 and as 18.7 in 1920. The increase is not so apparent in the mortality rates of South Carolina as shown by the following table:

Year.	Death Rate per 100,000 population
1916	4.6
1917	5.4
1918	7.1
1919	6.0
1920	5.1
1922	6.4
1923	6.6

There are a number of reasons given for this increase. Joslin stresses the decrease in the prevalence of infectious diseases and the lessened mortality in infancy and from tuberculosis, thus allowing a much larger proportion of the population to reach the fifth and sixth decades, when diabetes most commonly occurred. Greater accuracy in diagnosis and the more general use of the laboratory are undoubtedly responsible for the discovery of many cases formerly overlooked. Undoubtedly the discovery of Insulin has stirred up an increased interest in diabetes and we are more on the alert to find these cases since we can do so much more for them than before this discovery.

The great increase in the consumption of sugar in the United States in the past two decades may also be playing a part in this increase of diabetes.

DIAGNOSIS: This is not always as easy as it might seem. Not every person whose urine reduces Fehling's solution is a diabetic. We may get a reduction from the urine of a patient who has just had a general anaesthesia. Many drugs excreted in the urine will give a reduction of Fehling's solution as chloral, urotropin, copaiba, acetanilid and others and chloroform put in a specimen of urine for preservative purposes will reduce Fehling's solution. A temporary glycosuria follows head injuries, operations on the head where the floor of the fourth ventricle is disturbed, shock, business worries, fright; and we find a reduction of Fehling's solution from the urine of pregnant and lactating women. I see a considerable number of this last group. The patient comes into the hospital for an operation and the laboratory reports sugar present in the urine. On questioning the patient we find that she was nursing a baby when she came for the operation and the fermentation test quickly shows us that the reducing agent in the urine is lactose and not glucose. It is an interesting fact that these lactating patients with lactose in their

urines present a normal blood sugar. This has been a fact in the few cases in which I have had a blood sugar done.

How then are we to make a diagnosis of diabetes in a patient with the symptoms of diabetes? First find out if the patient has been taking an excess of carbohydrates. If the urine of this patient reduces Fehling's solution (or a similar solution as Haine's or Benedict's solution) and ferments with the formation of gas when placed in a closed tube and a small piece of fresh yeast is added, then the patient has a glycosuria. This should be placed in an incubator and normal urine to which has been added glucose solution run as controls. If gas forms, you may be sure that there is glucose present in the urine. The next step to be taken is to have a blood sugar done. Normally, there is 1 part (more or less) of glucose in 1000 parts of blood or .1%. The concentration of glucose usually rises to about 1.7 parts in 1000 in the blood before the glucose "spills over" into the urine. This is called the renal threshold. So, if your patient has sugar in his urine and a blood sugar of 17% or over, then you may be sure that he has diabetes.

The blood sugar estimation is very necessary in all cases. Some people have a lowered renal threshold and glucose is found in the urine when there is only a normal amount of glucose in the blood. These cases are cases of renal diabetes and are not true diabetes. On the other hand, patients who have had a glycosuria for a long time will frequently run a high blood sugar and show no sugar in the urine. I have under my care at the present time an old man whose blood sugar varies between .2% and .3% and over and he has failed to show sugar in his urine at any time since being under my care. But for the past 25 years he has shown sugar in his urine constantly. His renal threshold has risen. He came under observation on account of a diabetic gangrene of his foot. Yet he had no sugar in his urine.

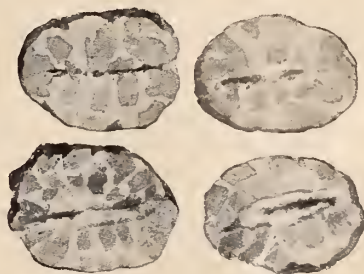
There are other procedures that may be

useful in helping one to make a diagnosis of diabetes, the details of which I will not go into at this time. I might mention the glucose-tolerance test as being very helpful in doubtful cases. In this test, 100 grams of glucose in solution are given on an empty stomach and tests of the urine and blood sugar estimations are made at half hour intervals following for a period of three or four hours. In a non-diabetic, the urine and blood sugar should return to normal promptly.

The laboratory tests for glycosuria and hyperglycaemia are essential in making a diagnosis of diabetes mellitus.

#### BIBLIOGRAPHY

1. Oxford Medicine. Vol. 4.
2. Diagnostic Methods. Webster. 3rd. edition.
3. Clinical Diagnosis. Todd.
4. Mortality Rates. 1910-20. Dept. of Commerce, Washington, D. C.
5. Prin. & Prac. of Med. Osler & McC.



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## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Dorsey, Thomas M.: Epididymotomy for Acute Epididymitis as an Office Procedure. *American Journal of Surgery*, April, 1924. No. 4, Vol. 38.

The writer states that epididymitis is usually secondary to inflammation of the posterior urethra associated with involvement of the seminal vesicles and prostate. It may be caused by any of the pus-producing organisms or the tubercle bacillus; the gonococcus is the most frequent cause. Attacks which follow urethral instrumentation usually develop very rapidly and quickly subside. In any case, however, where the inflammation does not subside rapidly, the writer thinks that epididymotomy should be performed. He thinks that the operation should be done in all cases from all causes (not considering tubercular type).

Palliative treatment had been used almost exclusively until about a year ago; but since then, the author adopted the surgical procedure and has found the results incomparably better and now advises operation even in the mild cases. He has found that the duration of the disease is much shortened and that the comfort and general condition of the patient is much more satisfactory when operation is done than in those on whom palliative measures had been used. Recurrences have not occurred in his series of cases following operation, and they were not infrequent after using the palliative treatment.

The writer describes his method of using local anesthesia and finds it quite satisfactory. The technic of operation is only slightly different from that advocated by Hagner. The operation is done in the office even in the most acute cases.

Twenty to thirty c. c. of 0.5 per cent novocaine solution with three to six drops

of adrenalin added is used. The method of producing anesthesia is described as follows: "The first step is to infiltrate the cord. This is done by grasping the cord between the thumb and forefinger of the left hand at the point where it emerges from the external ring. The needle is introduced into the cord and from 5 to 10 c. c. novocaine solution are injected in all directions; it is also well before removal to point the needle upward and inject a small amount of the solution into the inguinal canal to be certain of completely blocking all nerves in the cord. The needle is then pushed downward along the cord through the same point of entry to the region of the globus major and more solution is injected there. The scrotum is then circuminjected to the perineum on the side to be operated upon. This injection is made where the scrotal skin merges with that of the thigh. Even though the operation is to be unilateral, Braun recommends anesthetizing the scrotal skin all the way around the same as would be done for bilateral operation. We have not found this necessary; complete anesthesia is secured by injecting one side. Finally, a small amount of novocaine solution is injected along the line of the proposed incision." With this method the testicle and epididymis may be handled without any discomfort to the patient; the anesthesia lasts for about two or three hours and the patient is able to walk home after the operation without suffering pain.

He thinks that surgery is the rational procedure for the treatment of cases of epididymitis and that there is less likelihood of sterility following operation than palliative treatment in the bilateral cases.

He concludes as follows:

(1) Epididymotomy invariably affords

immediate and permanent relief of pain;

(2) There are no recurrences after operation unless there is a fresh infection;

3) The course of epididymitis is without question shortened, as is also the urethritis;

(4) Patients are probably less likely to be sterile;

(5) Treatment of the urethritis can be begun much earlier;

(6) Finally, the operation can be safely and successfully performed in the office under local anesthesia."

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

Many have written of the increased susceptibility to diseases of the Eye, Ear and Nose that occurs as a result of Vitamine A deficiency and endocrine imbalance and dysfunction, due frequently to errors of diet and metabolic disturbances, an increased susceptibility manifesting itself as a diminished resistance to infection and a lag in getting well. One of the undesirable disturbances of metabolisms is an increase in Calcium and Phosphorus elimination. This, according to Rupprecht, is prevented by carrot juice if not cooked to 130 C, extract of skimmed milk and Cod Liver Oil. It is therefore of benefit to regulate the diet—give green vegetables, egg yolks, milk—(the skimmed of modern dairies takes much of value from the milk)—corn bread whole wheat bread, tomatoes, beans, peas—administer Cod Liver Oil and Syr. Fer. Iod., as a almost routine in ear and nose infections, ear more than nose and give endocrine gland in nose diseases perhaps oftener than ear diseases when there is a disturbed calcium metabolism in which alkali reserve is greatly diminished, calcium, alkalinity and

glandular therapy seems indicated seeming to benefit the nasal conditions.

### REFERENCES.

Vitamine and Calcium and Phosphorus Balance—*Monatsschrift fur Kinderheilkunde*—Leipzig (26: 321-432, July 1923).

Cod Liver Oil—Squibb Memoranda—March 1924.

Routine Treatment of Acute Otorrhea with Special Reference to Children—Otis Wolfe—*The J. of the Iowa State Med. Soc.* Jan. 1924.

Plea for International Investigation Into Oto-Sclerosis and Allied Forms of Deafness—*Laryngoscope*—December 1923.

Xerophthalmia—*Am. J. Ophthalm.* 7-79—Feb. 1924.

Changes in Temporal Bone in Experimental Rickets and Their Relations to Oto-Sclerosis—*International Survey of Otology*—page 5 January 1924.

Deficiency Diseases of Ophthalmology and Otology—Dr. J. A. Stucky—*Tennessee Med. Ass.* 1924.

*Journal American Medical Association*—April 26th, 1924.

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WANTED—The story of my life by Marion Sims. Two Copies, Address—The Journal.

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## SURGERY

**SAMUEL ORR BLACK, M. D., Spartanburg, S. C.**

### CERTAIN ASPECTS OF THE GOITER PROBLEM.

Crile. *International Journal of Medicine and Surgery.* April 1924.

In Akron, Ohio public school work, Doctors Marine and Kimball in 1920 demonstrated the possibility of goiter prevention by the administration of iodine.

During adolescence this drug when properly administered tends to prevent goiter.

However, once the abnormal condition develops, the chief aim then is to reduce the amount of the gland secretion, if it be excessive, or to give to the patient the active principle of the gland, provided the secretion be too little to carry on the glands ordinary work.

Crile states that regardless of the type, all goiters should be removed, except the small colloid ones, which cause neither disfigurement nor pressure symptoms.

Fetal adenomata are a source of peril if left alone, as they tend to become malignant or to produce hyperthyroidism.

The author believes that an occasional over-activity of the gland is traceable to a focal infection, and when so, if the focus

be removed, the gland will return to its normal function. On the other hand he also believes that a period of protracted stress or mental strain might rarely cause the same condition.

The syndrome then, as expressed in Basedow's or Graves' Disease is the real thyroid problem.

Hyperthyroidism affects the entire organism, digestion is disturbed, metabolism increases, the heart is overworked, the vascular system is affected, the kidneys are diseased, the nervous equilibrium is disturbed, the eyes often protrude, general body weakness ensues.

Some symptoms go hand in hand with early pulmonary tuberculosis, or with certain types of neurasthenia, with paroxysmal tachycardia, and other functional and organic disorders and accurate diagnosis therefore is of the utmost value.

Crile believes that removal of enough of gland by operative procedure is the treatment of choice, and that it should be augmented by proper attention to physiologic rest, to diet, to hydro-therapy, to the eradication of infectious foci.

It is his experience that surgery properly resorted to is the shortest road to recovery.



## ROENTGENOLOGY

*T. A. Pitts, M. D., Columbia, S. C.*

X-ray has served largely to place urology as one of the foremost branches of medicine for accurate diagnosis. Clear plates tend always to make correct readings possible, preparation of the patient is of prime importance in obtaining good plates.

The method of preparation that seems to give best results is on the night preceeding give the patient six to eight ounces of castor oil and make the plate on the following morning before food is taken. Large doses of Compound Licorice Powder is sometimes used. Sometimes good plates can be gotten with smaller doses of oil or a mixture of

castor oil and mineral oil but not as a rule. Enemas containing salts, glycerine and turpentine until the return is clear may often be of advantage. Salines by mouth tend to increase gas formation.

With a roentgengram free from gas and foecal shadows probably 90% of stones in the G. U. tract can be shown, the percentage varying in different laboratories. The general outline of the size, shape and position of the kidneys can be seen. With injection of x-ray opaque solutions definite evidence can be gotten as to tumors, various infections, size of the pelvis, ureteral kinks, strictures and spasms.

## INTERNAL MEDICINE

*By N. Barnell Heyward, M. D., Columbia, S. C.*

The medical profession throughout the world is intensely interested in diabetes mellitus. Almost every medical publication contains one or more articles on some phase of the treatment, diagnosis or symptomatology of diabetes. This renewed interest is due in large part to the discovery of insulin. Those who attended the meeting of the State Medical Association in Orangeburg and heard the papers on diabetes undoubtedly went away with new ideas and a clearer conception of the disease. One thing brought out most clearly was that insulin is not a cure-all in the treatment of diabetes. The papers

touching on this phase of the subject stressed the fact that insulin had it's greatest usefulness in the severe cases of diabetes and in its medical and surgical complications. The most spectacular results from its use are obtained in the cases of diabetic coma.

The symposium on Diabetes also brought out very clearly that the average case of diabetes does not require the use of insulin in its treatment and that insulin is only another aid in the handling of our severe cases of diabetes.

## MINUTES

### REPORT OF FIRST MEDICAL DISTRICT

Consist of six counties, Beaufort, Berkeley, Charleston, Colleton, Dorchester and Jasper.

Beaufort, Berkeley, and Jasper Counties are not organized, no fault of the physicians in these counties. They are too few and far apart to get together. Several have joined Medical Societies in adjacent Counties. I have heard of no illegal practitioners in these Counties.

Charleston Medical Society is very active; it has seventy-eight (78) members, two scientific meetings each month, except in the summer months. The average attendance is thirty-three (33). One member was expelled who was practicing the "Abrams Treatment".

Colleton County is organized but not so active, only held three (3) meetings last year. Membership is nine (9). Eight (8) eligible members not on register.

Dorchester County Medical Society is live and active. Membership is twenty-one (21). Meeting held each month. Harmony and co-operative spirit prevail.

Two District meetings were held during the year. They were well attended and good papers were read. The District is in good condition.

A. E. Baker,  
Charleston, S. C.

April 15th, 1924.

Mr. Chairman and Members of the house of delegates:

The second district is composed of the counties of Calhoun, Edgefield, Lexington, Richland and Saluda.

I haven't any report from Calhoun County, and I do not think they have any regular meeting.

Edgefield meets twice a year, has eight in attendance with eleven enrolled members.

Lexington society meets quarterly, four times a year has an average of nine in attendance with fifteen enrolled members.

Our association in Richland meets monthly, always has a very good attendance and usually a very creditable scientific program, and has about ninety enrolled members, occasionally we have an invited speaker which

we find very instructive and beneficial.

Saluda meets quarterly with an average of six in attendance and eight enrolled members.

Our district association meets twice a year, January and June, usually with a very good attendance and a very good scientific program. I am informed that we do not have any illegal practitioners, other than the real Quacks,—they are always with us.

Respectfully submitted,

Samuel E. Harmon,  
Councillor of Second District.

Clinton, S. C., April 14, 1924.

Mr. President and Gentlemen of the Association:

I hereby submit my report of the Third District Medical Association, which is composed of Abbeville, Greenwood, Laurens, McCormick, and Newberry Counties.

We are all functioning about normal except McCormick, which has so few members are not organized, but the fellows take interest in attending other medical societies and the Annual District Association. We had a splendid district association the past year at Greenwood, we are to meet in Abbeville this year. The societies of the third district are really doing some good work. The meeting of the Laurens Medical Society has changed the hour of meeting from 2:30 to 7:30 P. M. and provides a Dutch luncheon at every meeting. We hope this change will increase the interest.

We still have reports of illegal practitioners in the district. We have some regular practitioners in the district not enrolled as members, but we still encourage them all to join.

Good fellowship prevails in our district which is a very happy way to live. One secretary made especial mention of this in his county and I think a good thing to report, because we hope to continue to make it a significant fact that builds up ethics and dignity of the profession.

Very respectfully,

T. L. W. Bailey,  
Councillor of Third District.

The Fourth District is composed of the seven counties of Union, Spartanburg, Cherokee, Greenville, Pickens, Oconee, and Anderson and has a medical population of over two hundred.

For fifteen years the district medical society has met each Fall and last year in Greenville an excellent meeting was held. Five of the counties in this district have good hospitals, and the other two counties are conveniently situated to nearby hospitals.

Your councillor has visited most of the county societies during the year and hereby puts the others on notice that early in the present year he will meet with them.

Reports indicate that the county societies meet regularly, with good average attendance, and scientific programs of a high order. Several of the larger societies, Greenville, Spartanburg, Anderson, occasionally have special meetings with distinguished guests as speakers. Besides this the Greenville Society the past year entertained the Tri-State Medical Society in a creditable manner.

J. R. Young.

The councillor of the Fifth District begs to submit the following report:

The Fifth District is comprised of Chester, Kershaw, Lancaster, Fairfield, and York Counties. Chester County reports thirteen active members, 3 honorary members, meetings held during the year, 4; average attendance, 14; eligible members not on roster, 3; one licensed chiropractor; have had good meetings, good programs, and good eats. Fairfield reports 12 members; eligible members not on roster, 3; meetings held during the year, 1; good program at this meeting. Kershaw reports 12 members on the roll; meetings held during the year, 12; average attendance, 11; eligible members not on roster, 2 or 3; illegal practitioners, 1; Lancaster reports no meetings held since Dr. Allen's death. There are 18 physicians in this county and judging from the way they entertained our district meeting we are sure that reorganization and some effort on the part of the more interested ones will build up a splendid society. York reports 34 members on roll; meetings held during the year, 3; average attendance, 12; eligible members not on roster, 5; illegal practitioners, 1.

We held two district meetings during the year, one at Rock Hill and at Kershaw. Both these meetings were well attended,

good programs were carried out, and we were highly entertained by the local physicians at both places.

Thanking my fellow councillors and all others who have shown me courtesy during my term of office, and believing it to be for the best interest of the district, I hereby tender my resignation as councillor of the Fifth District.

Respectfully submitted,

Thos. N. Dunlin.

Councillor Fifth District.

#### REPORT FROM SIXTH COUNCILLOR DISTRICT

Mr. Chairman and Gentlemen of the House of Delegates:

The sixth district comprises the counties of Florence, Darlington, Chesterfield, Marlboro, Dillon, Marion, and Horry.

The societies are all organized and working, some of them very active and doing good work. Basing this report on the annual score cards from the Secretaries, I find that we have one hundred and ten members enrolled in the district. There are about thirty eligible physicians not on the roster. The average attendance reported by the societies is about 30 per cent. The average meetings are about four, during the year, though some societies meet monthly. There are seven illegal practitioners in the District including the Chiropractors and Abrams.

Our district society, the Pee Dee Medical, meets annually at Florence. This annual meeting is one of the big events of the district. This year it was largely attended, and there was a splendid scientific program. Our whole district enjoys the annual meeting of the Pee Dee and the interest increases each year.

The question of illegal practitioners is frequently brought up to my attention. The men expect me as Councillor to run the illegal practitioners out, but it is hard and practically impossible to convict one of them, when they have shrewd lawyers who take advantage of every legal technicality, and we have nothing but a poorly gotten up complaint.

People do not like to give evidence, and Doctors do not like to prosecute, and we have no money with which to employ high grade legal talent. It is my opinion that we should memorialize the General Assembly and ask an appropriation of \$5,000.00 or so much as may be needed for the purpose of



employing legal talent in these cases. This money should be placed with the Attorney General and used through his office in such specific cases as are reported to him through the recommendation of medical societies and Councillors.

If this were done, there would be sufficient funds to follow up these cases and

drive them out, but as it is now, there is not much to be expected from an ordinary prosecution.

I hope that this House of Delegates will take some action on this matter.

Respectfully submitted.

Chas. R. May.

## CORRESPONDENCE

Editor,

Journal of the S. C. Medical Association,

Dear Sir:

In your March, 1924, issue there is a letter from Dr. J. Shelton Horsley, of Richmond, relative to my article entitled, "The Present Status of Gastro-Enterostomy," which appeared in your issue of February, 1924.

In my article, I stated, "Horsley says that the best results follow gastro-enterostomies performed for complete pyloric stenosis, where the alkalinity of the duodenal contents cannot be lowered by the passage of acid gastric contents through the pylorus. Therefore the unreduced alkalinity of the duodenal contents can better protect the jejunal mucosa at the gastro-enterostomy opening than if this alkalinity had been reduced by the passage of the gastric juice through the pylorus." My criticism of Dr. Horsley's explanation was as follows: "The alkalinity of the duodenal contents would be just as much reduced by the acid stomach contents when they came together at the gastro-enterostomy opening as they would be if the mixing took place in the duodenum." I further claimed that, "the acid gastric secretion would do the jejunum more harm to be discharged directly into it than to first be partially neutralized by passage through the duodenum."

Dr. Horsley says that he believes that my criticisms are not well founded, and states that he has heard other similar criticisms of his theories. I have never seen these criticisms by others. My criticism was written because, in reading his explanation, I was at once struck with what appeared to me to be illogical deductions. Further, after reading his full explanation, as given in his letter to the Journal, I must confess that I still cannot see where his explanation is satisfactory.

Dr. Horsley states, "First we must re-

member that the upper part of the duodenum is the normal mixing chamber for acid and alkaline contents, and consequently it is to some extent immune to the acid of the stomach. However, further down in the small intestinal tract in the upper jejunum the intolerance to acid seems to be greater than in the upper duodenum. Acid would be more likely to produce irritation in the jejunum where normally only alkaline contents existed, than in the upper portion of the duodenum." Exactly, this being the case, it would seem that the greater the per cent of the acid gastric contents that passes through the duodenum before striking the less well protected jejunum the less harm would be done to the latter at the gastro-jejunal opening. In this discussion we are concerned entirely with the effect upon the jejunum and not with the effect upon the duodenum. Dr. Horsley claims that the bad effect of the gastric juice "is not the direct effect of the acid, but the lowering of the alkalinity of the duodenal contents which is thus unable to protect the jejunal mucosa at the stoma of the gastro-jejunosomy from the acid that gains exit here." This is apparently a self contradiction. If the direct effect of the acid gastric juice is not what does the harm, then why argue that the highly alkaline duodenal contents is what we must depend upon to protect the jejunum from this very same acid gastric juice by reducing its acidity? He seems to take it for granted that the alkaline secretions of the duodenum will arrive at the gastro-enterostomy opening before the acid gastric secretions begin to be emptied there. But, is this the case? As the food reaches the stomach first, it is natural to suppose that the stomach glands are stimulated to active secretion at least as soon, if not sooner, than are the structures whose secretions enter the duodenum. This being true, no doubt the

freshly secreted acid gastric juice would reach the exposed jejunal area ahead of the duodenal secretions, and begin their damage at once. While it is true that there is not much gastric secretion when the stomach is empty it is also true that the protective duodenal contents is also much reduced at this time.

Dr. Horsley lays much stress upon the fact that the area of jejunum exposed to the gastric juice is small. This is an argument directly opposed to his theory, for in cases of complete pyloric stenosis the entire amount of acid gastric secretion has to pass this small area, through the new opening, without any per cent of it being first neutralized by passage through the duodenum. The common sense view of the matter is that the greater the per cent of unreduced acid that has to pass from the stomach directly into the jejunum, the more likely the jejunal mucosa is to be injured in this small area against which it is all discharged.

Dr. Horsley uses to support his argument the fact that the processes occurring between these secretions are "largely biologic." When an acid and an alkali meet, and counteract each other, the action is chemical, no matter whether it occurs in test tube or in a living organism. And it is supposedly the destructive chemical action of the gastric acid that attacks the jejunal mucosa, reducing its resistance and finally causing ulceration, with the assistance of the digestive enzymes.

Respectfully,

Carl B. Epps.

The above was submitted to Dr. Horsley before publishing his reply.—Editor.

May 26, 1924.

Editor,

Journal of the S. C. Medical Association,  
Seneca, S. C.

Dear Sir:

I have a copy of the reply of Dr. Carl B. Epps to my letter of March 17th published in the Journal of the South Carolina Medical Association.

I probably did not make my contention very clear in my letter. Dr. Epps' original criticism was concerning my explanation for the resistance of the mucosa of the jejunum in a gastro-enterostomy to the acid gastric juice when the pylorus is closed, although it is often damaged when the pylorus is open.

When the pylorus is closed the gastric



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juice gains exit only by the gastro-enterostomy stoma. The chief alkaline secretion in the duodenum comes from the pancreas and liver, which, while more abundant during the gastric digestion of food, occurs to a very considerable extent while the stomach is empty. This fact is evidenced clinically when the common duct is drained and the bile flows from the drainage tube even when the stomach is empty. Consequently there is a current of the duodenal contents, consisting largely of the secretion through the common duct, which is more or less continuously carried along the jejunum. This current bathes the jejunal mucosa and to some extent flows into the stomach through the gastroenterostomy opening. If a high alkalinity is maintained, the gastric acid is easily neutralized and the jejunal mucosa is protected.

However, when there is an open pylorus the gastric juice gains exit in two ways, both through the pylorus and through the gastro-enterostomy stoma. That portion of the gastric juice which goes out through the pylorus lowers the alkalinity of the duodenal contents, so that at the stoma the alkalinity

is not sufficient to counteract the acidity of that part of the gastric juice going through the gastro-enterostomy. So the jejunal mucosa may be irritated.

Of course the reactions of alkali and acid are simple chemical processes, but back of them, involving the secretion of the respective alkali and acid, as well as the amount secreted and the resistance of the tissues to their effects, are biologic processes that are exceedingly complicated. In a recent number of Archives of Surgery, Dragstedt, of the Department of Physiology of the University of Chicago, called attention to the fact that no one has ever satisfactorily explained why the stomach does not digest itself.

The theory that I mention appears to me to be a reasonable one for explaining the difference in resistance of the jejunal mucosa after gastro-enterostomy with a closed pylorus and with an open pylorus,—a difference clinically well known—though I will readily abandon the theory if a more logical explanation appears.

Respectfully,

J. Shelton Horsley.

## SOCIETY REPORTS

Mr. President:

The following counties comprise the Eighth district: Aiken, Allendale, Bamberg, Barnwell, Hampton and Orangeburg.

The president of the Aiken county society informed me that they have not done much this year.

Allendale, Barnwell and Orangeburg societies have held regular meetings with very good attendance.

The action of the Barnwell county society in expelling two members for practicing the Abrams method of treatment was sustained by the Council and later by the Circuit court.

Bamberg and Hampton societies have had only a few meetings during the year. The Bamberg society has taken on new life, however, and is now doing satisfactory work.

We have had two district meetings, one at Hampton and the other at Orangeburg.

I do not know of any illegal practitioners in the district.

Respectfully submitted,

L. A. Hartzog.

Councilor of Eighth district.

### REPORT OF COUNCILLOR OF SEVENTH DISTRICT.

District meeting at Bishopville on July 5th., 1923 with about forty present; about 50 per cent of the entire physicians in this district. I may add that this 50 per cent is about the percentage at all our meetings since we re-organized.

We are to meet this year in Manning, July 10th.

#### Report By Counties.

Clarendon: Not reporting.

Georgetown: Number on roll 6. Three meetings during the year. About four eli-



gible members not on the roster. One illegal practitioner in the county. We have an injunction against this illegal practitioner but nothing further has been done, perhaps the South Carolina Medical Association can help.

Lee County: Number on roll eight. No meetings during the year but I understand they have had one since making out this score card. Six eligible members not now on roster. No illegal practitioners in the county. Remarks: Almost impossible to get the members to attend meetings.

Sumter County: Number members on roll 24. Twelve meetings during the year. Two eligible members not now on the roster. No illegal practitioners in the county.

Williamsburg County: Number on roll ten. Two meetings during the year—average attendance six. Five eligible member not now on the roster. One illegal practitioner in the county.

Respectfully Submitted,

T. R. Littlejohn,

Councillor.

## RIDGE MEDICAL ASSOCIATION

The Ridge Medical Association met in the offices of Dr. W. P. Timmerman on Monday evening, the 19th of May. Two interesting cases were examined in the clinic which was followed by discussions.

After the regular business the members repaired to the Majestic Cafe where dinner was served.

After dinner an election of officers for the ensuing year was held with the following results. President, Dr. Jas. Crosson of Leesville; vice president, Dr. Karl L. Able, Batesburg; Secretary and Treasurer, Dr. E. C. Ridge'l, Batesburg.

The regular meetings of the Ridge Medical Association are held on the third Monday evening in each month. It has a membership of about thirty, including physicians and dentists in Batesburg, Leesville, Ridge Spring, Wagener, Pelion, and contiguous territory. The programs usually consist of clinics, papers, and discussions. There is

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always something of interest to those who attend and much valuable information is exchanged.

Dr. D. B. Frontis of Ridge Springs is the retiring president, and Dr. A. L. Balenger of Batesburg the retiring secretary.

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### NEWS ITEMS

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The Journal has received a communication from Capt. W. J. Burdell, U. S. A. Fort Moultrie--A notice calling attention to the many vacancies in the Army for surgeons. Full information may be had by writing to the Surgeon at Fort Moultrie.

—o—

The Journal has received an ample supply of application blanks for appointment in the Medical Reserve Corps. Officers of county medical societies are urged to write for these blanks and to present the claims of the Medical Reserve Corps to their respective county societies.

—o—

Lieut. Col. J. E. Daniel of Greenville, according to the public press, has received a commission as Colonel in the Medical Reserve Corps which makes him the officer of highest rank in South Carolina.

—o—

Dr. E. A. Hines of Seneca, Secretary of the Military Committee of the State Medical Association, has received a commission as a Major in the Medical Reserve Corps U. S. Army.

—o—

Dr. James A. Hayne, State Health Officer, has been elected President of the Association of State and Provincial Health Officers of North America and Canada. Dr. Hayne is already General Secretary of the American Public Health Association, and Chairman of the Section on Public Health of the Southern Medical Association.

—o—

Dr. M. H. Wyman of Columbia has been appointed Chairman of the committee on legislation for the coming year.

Reports from the Medical College of the State of South Carolina indicate that limits of entrance for the Freshman Class have already been reached. This is in line with the marked increase of applications at all of the class A Medical schools of the country, and is evidence that there is no real shortage of the number of doctors, the trouble being mainly with their distribution.

—o—

Dr. F. H. McLeod of Florence has been appointed by the President Chairman of the Special committee to appear before the Governor and the Attorney General, and to call their attention to the necessity for the prosecution of illegal practitioners.

—o—

Dr. W. A. Boyd of Columbia was recently the guest of honor at a joint meeting of the Oconee County Medical Society and the Womans Auxiliary. A delightful dinner was served at the Oconee Inn of Seneca. Dr. Boyd presented the claims of the crippled child and held a large orthopedic clinic in the afternoon.

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### SYSTOLE

---

True genius has no inheritors.—George Moore.

—o—

Better unborn than untaught.—Proverb of Scotland.

—o—

War makes thieves and peace hangs them.—Proverb of Scotland.

—o—

Try to enjoy the great festival of life with other men.—Epictetus.

—o—

The thirsty person goes to the well, not the well to him.—Proverb of Hindustan.

—o—

He who has health has hope, and he who has hope has everything.—Arabian proverb.

—o—

The holy prophet Zoroaster said,  
The Lord who made thy teeth shall give thee bread.—Persian couplet.

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W. L. FUNKHOUSER, M. D., F. A. C. P., Atlanta, Ga.,  
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E. A. HINES, M. D., Secretary S. C. Medical Association, Seneca, S. C.  
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Prof. of Pediatrics, Medical College of South Carolina.  
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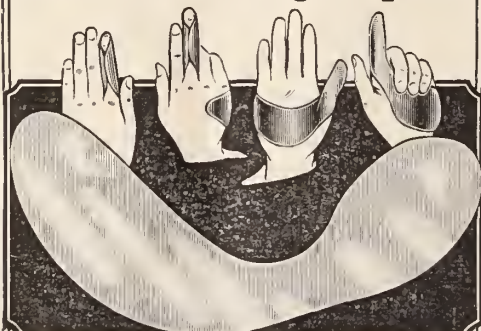
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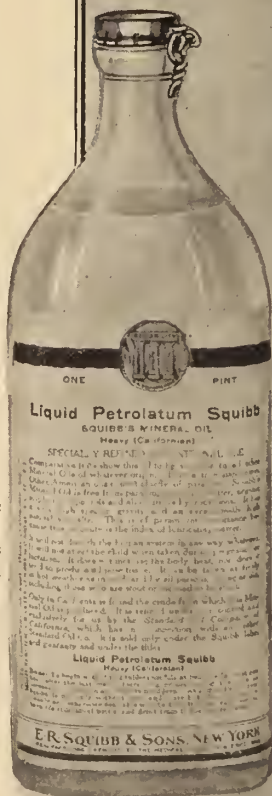
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VOL. XX.

GREENVILLE, S. C., JULY, 1924

NO. 7

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## OF THE

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## EDITORIAL

### THE HEALTH EXAMINATION WHAT ARE YOU GOING TO DO ABOUT IT?

Although the health examination for the supposedly well adult has been authorized by the A. M. A., by the National Health Council, by the State Board of Health of South Carolina, and by numerous other organized bodies, the average private practitioner has not yet awakened to the wonderful opportunity for him to contribute in this way to preventive medicine to a marked degree, and incidentally add to his daily income in a legitimate way. We are familiar with many hundreds of excellent scientific programs, but the paucity of papers on this subject is indeed notable. Is the Doctor waiting for this work to be done by the

state, by so called commercial life extension enterprises, insurance companies, and health organizations of various kinds? We believe that the private practitioner stands ready to do this work when he is fully informed as to the need of it, as to where he may secure the proper blanks and instructions how to use them, as to the proper fees to charge, and finally as to the ethics of pushing the campaign along in the roles of private practitioner. Commercial enterprises have long forseen the wisdom of these examinations, and they are not slow to profit in dollars and cents thereby. The private practitioner sometimes complains that his business is slipping away from him by virtue of the encroachment of many agencies upon his practice. He has it entirely in his own hands now not to let this proposition pass

him by. County medical societies should have a paper on this subject, some phase of it, at every meeting until the whole profession becomes saturated with the idea. The blanks may be obtained from the A. M. A. at Chicago for a nominal sum. A manual is now in preparation by the A. M. A. for the convenience of the doctor. It is clear that a good fee should be charged for this work except in cases of those who are unable to pay. The examination should, however, be very thorough. This may be done by any capable general practitioner in the majority of cases, and it is he who should do it. The *Journal* will be glad to furnish additional information to any doctor in South Carolina.

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#### THE PICKENS COUNTY MEETING SPLENDID SUCCESS

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On July 2nd at Central the Pickens County Medical Society put over its third annual get-together program, inviting the profession of all the surrounding counties and the public as well. A scientific program of a high order was presented at the morning session in the public school building, a sumptuous mid-way luncheon was served, and in the afternoon there were public health addresses on various subjects. We wish to commend this type of program to all the other county societies for at least one annual meeting. The county society owes the public a great duty along this line. This work should not be delegated solely to health departments and to volunteer agencies composed of laymen. The organized medical societies should lead in all these matters. A well equipped public school building is now available in every section of South Carolina, and it may be used to great advantage by the county medical

society as a place to hold public meetings, clinics, illustrated scientific lectures, and if necessary surgical operations may be performed there where hospitals are not available.

Tonsil and adenoids clinics and dental clinics are being held in public school buildings in many parts of the country very successfully under the auspices of county medical societies.

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#### ONE THOUSAND MEMBERS THE GOAL

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The Secretary of the American Medical Association in his report to the House of Delegates gave South Carolina credit for an enrollment of nine hundred and sixteen members. This is the largest number ever recorded for the State Medical Association of South Carolina. There is no good reason why this numbers may not be increased to one thousand by the time the state association meets in Spartanburg in 1925. We urge therefore the county officers and the members as well to work to this end. The physicians recently licensed by the state board should be encouraged to join the county society at once. Economic conditions now would appear to be favorable for those who have been delinquent to pay up and renew their membership. It is highly gratifying that a large number have done this in the past few months. Committees on increase of membership may be appointed by the local societies, and ways and means devised for stimulating the interest of eligible members. Personal interviews by the officers and members are invaluable. A membership of one thousand will probably give us two delegates to the A. M. A. especially if an amendment proposed for enlargement of the House of Delegates goes through next year.



## ORIGINAL ARTICLES

### A BRIEF CONSIDERATION OF THE PSYCHONEUROSES

*By E. L. Horger, M. D., State Hospital, Columbia, S. C.*

The psychoneuroses manifest themselves as a nervous disorder of the mind, the symptoms of which have as a basis for their origin the numerous mental processes. The group of psychoneurotics comprises one of the largest in the field of psychiatry and doubtless the greatest in the entire medical world. In fact, so great is the number of persons afflicted with this disease, it becomes extremely difficult to gain a correct estimate of its scope. Not only does the psychiatrist have to deal with its victims but also the general practitioner of medicine and the specialists of the various branches encounter them when their condition manifests itself in physical form. Though a modern problem, receiving modern recognition it has existed for ages, probably from the beginning of time. As far back as medical history dates numerous examples are given showing treatment for it.

Why do we have the psychoneurotic with us; or, in other words, what is the cause of this condition? Among the predisposing factors may be considered: heredity, temperament, training and environment. Without going into a detailed discussion of these causes, I wish to state in regard to heredity that if the laws of Eugenics were followed there would be fewer neurotics, because all of us know that in order to have good stock certain requirements in the mating of the parents must be met. It would not be expected that the offspring of parents who are chronic alcoholics, one or both of whom are mental defectives, or who

otherwise have some stigmata, would be able to compete with those whose parents are normal both mentally and physically.

Regarding temperament it is only necessary to say that this depends to a large extent upon heredity and the surroundings of the individual. A child improperly trained in early childhood at home and at school frequently grows up to find himself unable to adapt himself to life conditions.

Environment also plays an important part in the development of the psychoneurotic. It might also be stated that it plays an important part in various other mental diseases. The psychoneurotic, because of one or more of these four factors—his temperament, improper training, hereditary defect or environment—is maladjusted. When such a person is placed in some peculiar environment or has to meet some trying condition with which only the normal individual would be able to cope, the psychoneurotic state or complex is frequently precipitated. It is impossible to point out definitely the causes of the condition in all cases. In some of them disorders of the body may play an important part, while others may have certain emotional idiosyncrasies; and again, others early in life may have had some experience, auto-erotic, which preys upon their minds creating a sensitiveness under the influence of which they are directed along certain unfavorable lines of life. Almost all of these individuals because of some mental disturbance are unable to remain in a balanced frame of mind for a long period. Truly, it may be said of the psychoneurotics that because of their peculiar traits it is impossible for them to adapt themselves to their surroundings.

Let us now consider the different types according to the classification adopted by the American Psychiatric Association and

briefly enumerate the characteristic symptoms.

1.—Hysterical Type—the symptoms that the term Hysteria describes “arise a fundamental hyper-suggestibility and a tendency to dissociation, which is in itself a distinct and specific predisposition of certain individuals.” These symptoms are complex and usually manifest themselves in an episode of some sensory or motor disturbance. Frequently the patients develop anaesthesia, often insensibility to heat and cold and sometimes impairment of vision. They may also develop various forms of paralysis, disturbance of speech, stuttering, or even loss of speech. They may have nausea, vomiting, diarrhea and may develop conditions resembling appendicitis, gastric ulcer, renal colic, gall stones, cardiac disturbances, etc. In fact the hysteric may try to, and often does, present symptoms that resemble any condition known to him, but if he is thoroughly examined and carefully observed, it will be found that there is not sufficient physical basis to warrant such symptoms.

To illustrate the hysterical type, the following case is presented:

White Female—Age 43. Admitted to State Hospital in 1913.

Family history—negative.

Personal History—She has always had a tendency to sit idly about. Never did any work. Severe case of malaria fever when quite young. Otherwise personal history negative.

Complaint—Severe headaches, stomach trouble, appendicitis, frequent pains in left side. She is continually asking for medicine for her ailments. She feels that there is always something wrong with her physically. She complains of back aching, and has a desire to remain in bed all the time. For about a year she has been complaining of being blind, stating that she cannot see at all and must be led about. She recognizes people she knows—by recognizing their voice, she says. On one occasion she asked the physician to send her some medicine.

“All right,” he answered and moved away. “Oh, doctor”, she called “You forgot to write that down.”

Physical examination, negative. An examination of her eyes by an oculist proved negative.

2.—Psychasthenic Group—In this group the symptoms are usually referred to the mental side of life. There is no disturbance of consciousness, neither are there any amnesias or areas of anaesthesias. This type of individual has obsessions and compulsions. They develop certain phobias, as, for example, fear of crossing bridges, fear of being alone or in the dark and fear of dirt. They sometimes lack ability to decide the simplest matters. Often they feel as if they are unequal to the duties of life. Frequently they do certain things which appear to be entirely against their will. This is known as compulsion. In addition to this there are cases in which patients have certain fixed ideas or thoughts that they cannot get rid of, no matter how hard they try.

An example of the psychasthenic group follows:

White male—Age 32.

Family history: One paternal aunt became insane at the age of 19. She talked all the time, refused to eat and died in about three months. His paternal grandfather was insane for a year before he died. Two brothers have some kind of nervous trouble, one of whom was at one time a patient at the State Hospital. A paternal third cousin was an epileptic.

Personal history: He got along well in school where he gave no trouble. He took a year's course in agriculture, after which he entered the navy during the World War. While he was out on the sea an explosion occurred, as a result of which one of his legs was broken and his spine injured. Since his discharge he injured his knee by falling through an elevator shaft.

History of trouble: He complains of nervousness which he says he has had for years. He states that there is nothing else

wrong with him, though at times he becomes restless, is easily fatigued, does not sleep well and frequently has impulses to do things which he cannot resist. He says that he cannot explain why he does certain things, but just has an impulse to do them and does them. To illustrate he tells the following stories which are given in his own words: "While working in a store I thought I heard some one call me. I ran to the elevator, opened the door, and without being able to control myself stepped into the shaft and fell a distance of fourteen feet. On another occasion while riding with two young ladies in an automobile, I had an impulse to drive my car into a creek eight feet deep. I can't explain it, but for some reason I couldn't resist the impulse, and when I found myself I was in the creek. Nobody received any serious injuries. Again I was once in a hotel and had retired for the night. I was suddenly prompted with the feeling that I had to rush out of bed and drive my car. Being unable to resist the impulse I left the hotel partly dressed, got in my car and drove for two or three hours before I gained sufficient control of myself to go back to the hotel and to bed."

Physical examination: Nothing was noted abnormal except that the cartilages in the right knee become easily displaced.

3.—The Neurasthenic type—Under this head comes that large group suffering from what is commonly known as "Nervous prostration." Their symptoms are usually of a physical character. Persons in this classification complain of fatigue, headaches, loss of appetite, and become very irritable at times. There may be loss of weight, restlessness, inability to sleep well, and a feeling of exhaustion upon waking. Often these persons complain of various paraesthesias and hyperesthesia, of constipation, stomach trouble and heart disturbance. They suffer with pains in the neck and back and altogether become self-centered. Frequently they are depressed and are unable to apply themselves to mental work. In fact they

may complain of various hypochondriacal ideas.

The following case of a white female patient, age thirty-one, illustrate the neurasthenic type:

Family history: A sister's mind became upset during the World War, for several months, but she was not sent to a hospital. Her paternal grand-father lost his mind about a year before death, but was never placed in a hospital. One paternal first cousin was an epileptic. Another paternal first cousin died in the S. C. State Hospital, and a third one is a patient there. The nature of their troubles she does not know.

Personal history: Nothing abnormal about her was noted up to the age of thirteen. Then she became sickly, was always complaining and not able to work any. She gave a history of irregular menses until age of nineteen. She suffered with pains in her back, severe headaches, pain in the chest and extremities. In 1908, she was in a cyclone during which the house was blown down. She received a blow on her head and an injury to her right shoulder. She states that in 1918 she had her teeth removed. Her father stated that when she was a child she was rather reserved and often would not see visitors when they came to the house; that she would act in a peculiar way, was spiteful and contrary; that she wanted to be alone; and that she was restless at night.

Complaint: She complains of neuralgia and rheumatism. She states that one of her kidneys is "corruptive." "I am just sick. Pulling my teeth may have pulled some of the nerves loose in my head. I believe my lungs are affected. I have pain in the chest, I feel sick all over. The pain starts in my kidneys and back, goes through my stomach and chest and then to the extremities. My hands and feet feel cold. I have been suffering for years. My heart pains me and I have severe headaches at times and stomach trouble. I just feel sick."

Physical examination: She was found to be well developed and well nourished.



Her teeth were absent, but nothing abnormal physically was noted.

4. Anxiety neuroses: The chief characteristic and most prominent symptom of this type is that the persons so afflicted are morbidly anxious. Frequently it is accompanied by marked nervous irritability which is usually associated with an anxious expectation or a fearful dread of some kind. The individuals are apprehensive as a rule, even extremely fearful. They may present various physical symptoms—cardiac and vaso-motor disturbances. Often there will be an increase in the heart rate, and occasionally it becomes irregular. Occasionally they develop sweating, nausea, vomiting and diarrhea, and sometimes they complain of dizziness and have trouble in walking. If a patient presents such physical symptoms, the prognosis is not considered good.

A case to illustrate this type of neurosis follows:

White male: Age 50.

Family history: Negative.

Personal history: Negative.

Complaint: He states that he has not been well for a number of years. He complains of pains in the stomach, of his feet burning a great deal, and suffers from ulcers of the mouth, burning in the throat, stomach trouble and shortness of breath. He appeared to be very apprehensive and was very anxious in his attitude toward himself. He voluntarily committed himself to the hospital, because, he states, he could not be benefited at home and wanted to be treated for his complaints. He was very susceptible to suggestion and would complain later of having any disease that was suggested to him. He complains of many vague and indefinite sensation about the body, particularly burning and tingling. He also complains of pain around the umbilicus.

Physical examination: Nothing abnormal was noted from a physical standpoint. He was well developed and well nourished. An X-ray examination of the stomach revealed nothing abnormal.

In the fifth and last group may be in-

cluded all the conditions which can not be classified definitely in the former groups. Here belong those—and many there are—whose symptoms overlap. A specific condition that may be included in this group in what is commonly known as "Shell shock". According to Jelliffe and White, "'Shell shock' is a popular term which has been applied to a multitude of conditions during the great war. While it is true that the explosion of large caliber shells may produce actual physical injury by setting masses of air and gas in violent motion or by creating a vacuum and so produce symptoms of concussion or of the nature of caisson disease. Still the vast majority of the cases included in this group belong to the functional neuroses and psychoneuroses, with, of course, a certain admixture of borderland conditions and mild psychoses. The largest number by far of the true functional 'shell shock' cases are cases of true conversion hysteria or anxiety hysteria. The mechanisms of 'shell shock' are therefore mechanisms with which we are already familiar. The term is an exceedingly unfortunate one, as it assists in deflecting the vision of both the patient and the public from the true state of affairs and thus of necessity makes it difficult to apply an effective therapy. 'Shell shock' is really a term for both patient and relatives to hide behind."

To make a definite diagnosis of psychoneurosis is at times exceedingly difficult. This difficulty is due to the fact that certain types of the psychoneurotic group may present symptoms that simulate almost any disease known. However, in the majority of cases a definite diagnosis can be reached by an accurate history of the individual, a complete physical examination, and by observation. After the possibility of any physical disease has been eliminated, the symptoms of which the patient complains will then place him in one of the classes of psychoneuroses just described.

The prognosis depends to a great extent upon the ability of the individual to adapt himself to his surroundings, which in turn

depends upon how he reacts to treatment. The attitude of the physician while making the examination is most important.

The treatment likewise requires tact. "The essential problem of medicine is to find and apply means to prevent or overcome physical and mental conditions, or failing that, to at least ameliorate the handicap and suffering occasioned by such a condition." Before starting treatment of a psychoneurotic it is very important to consider the exact nature of the trouble and its cause.

First, we wish to refer to the preventive treatment. This includes mental hygiene, but because of the vastness of the subject we will not go into a detailed discussion of it. However the importance of this subject can not be too greatly stressed. Preventive measures should be started early in life, commencing with the child, as soon as it begins to realize its existence. To ascertain whether preventive measures are necessary will necessitate an examination of all children mentally and physically. After this has been done and their condition determined, their work and life can be so arranged as to suit the conditions, and they can be placed in schools that suit their temperament and mentality.

The method of treatment of the condition proper will depend entirely upon the psychoneurotic and the symptoms presented. These treatments are as follows:

1. The "rest cure," a form of treatment employed by Dr. S. Weir Mitchell. Duration of this treatment is from four to ten weeks in a hospital. Patients are restricted in their habits, kept in bed, dieted, company restricted and all activities of the patients regulated.

2. Psychotherapy—which is nothing more nor less than treatment by suggestion; in other words, endeavoring to influence the mind by suggestion. It has been called "Mind cure," and "faith cure." This is one of the oldest therapeutic measures in existence. It is recorded in the History of

Medicine as having been employed by Imhotep in Egypt about 4500 B. C.

In regard to psychotherapy I might refer to the words of Dr. Osler: "The basis of the entire profession of medicine is faith in the doctor and his drugs and his methods.

3. Hypnotism is used with success by some authorities to treat the psychoneurotic.

4. Psychoanalysis—This form of treatment has been described and outlined by Sigmund Freud, a physician of Vienna. It is based upon the theory that the symptoms are produced by complexes. These complexes having long been hidden or buried in the subconscious mind break through and temporarily dominate the mind, giving rise to the various symptoms. The complexes are formed by some condition or experience in life which has become intolerable and can not be endured nor discarded from the mind by fixing the attention on other things or trying to forget it. Freud states that the greatest of all repressions are of a sexual nature and that they are pre-eminent in causing hysteria. The method of treatment consists in the procedure of going over the entire life history of the patient and carefully ascertaining the hidden and forgotten experiences. These analyzed and suggestions made to the patient that the psychical as well as physical events all have a cause. The dreams, too, are carefully analyzed, for often through them the repressed desires are expressed and mental conflicts that the patient did not know are found which form a content of his mind.

In conclusion, let me stress the importance of the physician's recognizing the psychoneurotic and the fact that he has a disease—a mental disease which requires treatment just the same as any physical disorder. If this individual were understood and properly treated by the profession the field of those practicing the various Cults would be much restricted.

## WORKS OF REFERENCE

1. The American Journal of Psychiatry. Volume II, Number 3, January 1923.  
The Psychoneuroses, by C. Macfie Campbell, M. D.  
Pages 367—378.
2. The American Journal of Psychiatry. Volume III, Number 1.  
The Psychoneuroses: Their Nature and Treatment—by Austen Fox Riggs, M. D.  
Pages 91-110.
3. Garrison's History of Medicine, Philadelphia, 1922, Third Edition.
4. The American Journal of Psychiatry, Volume III, Number 3.  
The Morphologic Basis of the Psychoneuroses, by Sante Naccarati, M. D.
5. Psychotherapy, by James J. Walsh, M. D.  
New York, 1923.
6. Clinical Psychiatry, by A. Ross Diefendorf, M. D.  
New York, 1915.
7. Disease of the Nervous System, by Jelliffe and White. Third Edition.
8. Outlines of Psychiatry, by William A. White, M. D.

## DISCUSSION.

DR. W. M. BEVIS (Columbia): I feel it would be unwise to try to add anything to what Doctor Horger has so ably presented to the Association, but there is one point that needs emphasis, one which seems to stand out above the others. In the recognition of these cases of psychoneurosis, these borderline conditions between the medical case and the psychiatric case, we must not forget that women are not the only

ones who have hysteria. A study of these conditions will demonstrate the fact that men have hysteria, sometimes of a worse type than we see in women. These borderline conditions should be at the fingertips of every medical man and should be recognized in time, and if possible to stay the development and remove the cause early we have a chance to cure them. This is an important subject and these conditions should be recognized by the medical profession and have early treatment.

## DISCUSSION.

DR. E. L. HORGER (closing): I would like to emphasize the importance of the preventive treatment in mental hygiene, recognizing peculiarities in the child by physical and mental examination, and if an abnormality is found to try to so arrange the life of that individual that it can cope with its surroundings and become adapted to them.

I also wish to state that the general practitioners if they are not able to recognize these conditions of psychoneurosis, if they are not able to treat them, then these cases should be referred to some specialist in that line. Further, I think once a psychoneurotic has developed that they require as much special treatment as an individual who has some certain condition such as appendicitis, tonsillitis, or gastritis, and if the general practitioner cannot treat them they should be referred to the specialist. But if these cases are recognized in time they can frequently be arrested. If they develop they require special treatment, and a lot of times in spite of special treatment they cannot be cured.



GYNECOLOGICAL CONTRIBUTIONS  
TO OBSTETRICAL DIFFICULTIES.

*By G. T. Tyler, M. D., Greenville, S. C.*

It is interesting to note the reversion to the earlier association of obstetrics and gynecology. In European clinics, the head of the department of obstetrics was, and still is, also gynecologist; and in the American Medical Association, there was formerly a section of obstetrics and gynecology. Because of the advance in gynecological surgery, these departments became separated in our medical schools, and for some time were individual departments. This opinion was reflected in a change of sections in our national association to a section of obstetrics, and one including gynecology and abdominal surgery. At present, however, the section is obstetrics, gynecology, and abdominal surgery; and our medical schools are arranging the department of gynecology under that of obstetrics. Certainly this return to the former status is natural, for child-bearing is second in importance only to the preservation of life; while of gynecology, the most important division is the conservation of the child-bearing function throughout this period of woman's existence. To be sure its field is broader than this; but it would still be entitled to existence if the maintenance of procreation were its sole activity.

These two divisions of medicine, going hand in hand, are mutually dependent; and they should be more intimately associated when we consider that between 16,000 and 20,000 women die in labor each year; that about 8,000 of these deaths are due to infection; and that the mortality in maternal deaths has not lessened in twenty years. The U. S. is fourteenth in maternal deaths from sepsis—only Switzerland and Spain having a higher death-rate. One woman dies for every 154 babies born. And there

are annually 7,500 fetal deaths during childbirth. Again, in large cities 50% of gynecological operations are the result of child-bearing. In the N. W. Mutual Life Insurance Co., among insured women under 45 years of age, diseases of pregnancy and puerperium are second as the cause of death. The records also demonstrate that careful management of pregnancy, labor, and the puerperium prevents most complications causing the high mortality. Rice, whose paper I have quoted, conducted prenatal clinics at Bellevue. Only 50% of the patients of the obstetrical service attended. No eclampsia among these occurred during a period of three years. He thinks also that puerperal care prevents miscarriage and placenta previa in future pregnancies by lessening subinvolution and retro-version. Herein is a plea for more education and more pre-natal clinics.

Obstetrical difficulties begin with the occurrence of pregnancy; and are possible until the puerperium has passed. Only a few of these can be mentioned; and of these some of the more important gynecological aids have to do with difficulties in accomplishing pregnancy.

Sterility—According to the author you quote, the husband is responsible for sterile marriage in from 10% to 50%. A fair average is around 20%. In the wife, sterility is due to cervical infection or stenosis, retroversion, tubal infections, fibroids, and disturbances in metabolism. Much has been written on this subject in the last few years, especially since Rubin published his method of insufflation of the tubes. One result of this work has been to go more carefully into the causes of sterility. This method of establishing the patency of the tubes has been followed by pregnancy in a creditable percentage of cases. Treatment of stenosis by dilatation, of cervicitis by caustics, better by the actual cautery; radium, or plastic operation, myomectomy for fibroids rather than hysterectomy; restoring malposition, clearing up infection of the tubes—all these obstacles'

must be removed before pregnancy can be accomplished. The paper by Hunner in the Southern Medical Journal, April, 1924 reports 25% of pregnancies in 363 sterile patients whom he treated. Individual case reports are interesting: Cullen resected the interstitial portion of one tube, reimplanted it into the uterine cornu. Pregnancy resulted. Tweety did the same, using a strand of catgut to keep the tube patent. Estes removed the tube and sutured a portion of the ovary over the cornu. Pregnancy resulted in each of these cases. Bell, of Liverpool is an ardent advocate of salpingostomy. It seems to me, however, that prevention of infection of the pelvic structures can be accomplished by more thorough treatment of infections of the cervix before they extend higher. Since gonorrhea is the most frequent cause of cervicitis, more thorough treatment will cure it. Reports from any well-conducted gynecological clinic will convince anyone of the truth of this statement. For the chronically inflamed cervix, radium incisions with the actual cautery, or radium, will often effect a cure. Plastics on the cervix or amputations must be done with regard to future pregnancies; for they have prevented conception, caused abortion, prolonged labor, and have required even Caesarean section.

Insufflation of the tubes is a valuable method. It must be used with care, in the absence of infection. But too much must not be expected of this method alone. The general condition of the patient, the state of nutrition, elimination of foci of infection other than the pelvis, and for completeness, the endocrine phase of metabolism, must be investigated.

Non-malignant bleeding. The many causes of non-malignant bleeding; excessive bleeding at puberty, hyperplasia of the endometrium, cystic ovaries, fibroids, and fibrosis of the uterus, premature separation of the placenta, previa extra-uterine pregnancy, syphilis of the uterus, may be mentioned as the more frequent.

Of these I want to mention especially the

use of radium for excessive bleeding in young women, without gross pathology. First syphilis must be excluded. It is often the cause of excessive hemorrhage. The results of radium treatment have been excellent. One must use caution against too large a dose for fear of inducing a permanent menopause. 300 to 600 milligram-hours is the average amount. Polak treated 31 cases, 6 of whom married. Of these, 2 became pregnant. In fibroids its use is constantly increasing. Clarke and Keene, Kelly, Miller, Graves, Schmidt, and many others report excellent results. 54% of fibroids are accompanied by some form of inflammation. Here radium is contra-indicated. If the patient comes to operation, myomectomy rather than hysterectomy should be done to preserve the child-bearing function. Normal pregnancy has occurred in an encouraging number of patients after radium treatment of fibroids. Pregnancy occurring in the fibroid uterus should be allowed to progress unless untoward symptoms arise. Then the fibroid may be removed without interruption of pregnancy; or if the location prevents labor, caesarean section can be done at term. In fibroids larger than a four—or five-months' pregnancy, the consensus is removal rather than radiation. The mortality of operation for removal of fibroids is 3% to 5%: of radium treatment, 0.

Pulmonary tuberculosis and pregnancy. It has been estimated by Norris and Murphy that over 32,000 women having pulmonary tuberculosis annually become pregnant; and that 65,000 women die annually of it. Bacon states that 36% of pregnant women with tuberculosis will die within one year after delivery. Pregnancy and labor reactivate latent lesions, and aggravate active ones. 20% to 30% of mild, and 70% to 90% of advanced cases have exacerbation in pregnancy and labor. Although there are a few opinions to the contrary, the overwhelming evidence is in favor of preventing, or interrupting the pregnancy in these patients (before the fifth month). Pottenger says that 88% of early, 30% of moderately ad-

vanced, and 29% of far advanced cases, improve after the interruption of pregnancy. Baldwin has advised hysterectomy in parous women who become tubercular; and he reports very satisfactory results in patients so treated. This has been my experience in the few cases I have operated upon. The patients did remarkably well, the process in the chest remaining quiescent or improving rapidly. Indeed I have gone farther than this in advising women with active tuberculosis not to menstruate; for going through the menstrual cycle causes a rise in temperature with aggravation of the symptoms. Pottenger's explanation of this fact is: new enzymes associated with menstruation are thrown into the blood-stream, releasing the anti-ferment which binds the enzymes that break down the tubercular tissue; and autolysis of the tubercle results. If menstruation can be prevented (involution of the uterus releases such enzymes also), this periodic autolysis of the tubercle will not occur. I have applied radium in a small number of these cases, giving 600 to 800 milligram-hours with very encouraging outcome. This will not produce a permanent menopause, and can be repeated if advisable. The work is too recent to report permanent results; but it promises much.

In such cases as Baldwin describes, radium sufficient to sterilize the patient permanently, it seems, would avoid the necessity of operation. Of 674 cases, there was no interruption of pregnancy in 630; but 44% of these patients became worse (Norris and Murphy).

After the fifth month, interruption of pregnancy is not attended with such favorable results. These patients are allowed to go to term, and labor is induced.

Children of tubercular mothers should be separated from them. Gronch reports that of 23,000 such children, separated from their mothers, only 7 became tubercular. Dulhart reported 2,400 children likewise treated. Of these only 1 became tubercular. This problem is a sociological one. It is given too little attention. The community suffers;

often both parent and off-spring become dependent.

Infection and toxemia: these are the gravest complications of pregnancy and labor. Infection causes one half of maternal deaths and a large percentage of postpartum invalidism. Toxemia may appear in any degree, and progress to eclampsia, which has been aptly named convulsive toxemia. Its frequency is:

1 in 79 cases (Cragin).

1 in 130 cases (Williams).

1 in 135 cases (N. Y. Lying-In).

In a review of the literature, one must be impressed with the importance of prenatal care in avoiding these complications. Andrews in 150 private cases had no maternal deaths and no still-birth. 10 cases had toxemia; none had eclampsia. He attributes this entirely to prenatal care and to discharge examinations—a result which can be duplicated by records from many obstetricians. Absorption from foci of chronic infections produces toxemia with and without convulsions, according to Talbot, who thinks that white placental infarcts are secondary to a lesion of the maternal blood-vessels at the placental site. The cause of the lesion lies in the teeth and the tonsils. Much of the pathology of the toxemia of pregnancy can be attributed to infection at the placental site. Bacterial emboli or showers of emboli from foci of chronic infection lodge here.

There is no symptom of chronic nephritis which does not appear in the syndrome of the toxemia of pregnancy. Talbot has found renal changes in 98% of autopsies of eclamptics; also subcapsular hemorrhages in the brain, kidney, liver, stomach, skin, as well as infarcts in the kidneys. Among these patients infection is very frequent. While 2.5% of non-toxic cases become septic, 14% of toxic cases without convulsions, and 25% of toxic cases with convulsions, become septic, irrespective of the method of delivery. Toxemia can be prevented by attention to general hygienic care, proper diet, preventing constipation, frequent examination of the urine, and removal of



foci of infection. There is often residual urine in pregnant women. This is an important factor in developing kidney lesions. Relieving this, and flushing the kidneys with large amounts of water are important measures.

Prevention of puerperal infection is still a most important object in obstetrics. Organisms are conveyed through the genital tract by the examining hand. Streptococcus is the worst offender. For every death, four patients are seriously ill, and others have fever. Bonney suggests that ordinary antiseptics, bichloride of mercury, carbolic acid, do not sterilize; but that those of the chlorine groupe and analine dyes are more efficient. The organisms are found about the perineum and in the bowel. Hemorrhoids, especially if infected, are often responsible. Rectal examinations have reduced the number of infections. When this complication occurs, more harm is done by meddling effort than by conservatism. Should chills occur, the process is likely extending into the veins; and pelvic phlebitis will result. Operation with ligation or resection of the thrombosed veins is necessary. The mortality in such cases is 18% to 20%. In the Woman's Hospital, Birmingham, England, of 889 cases of puerperal sepsis, 164 (18.4%) died. Dirty obstetrics is still with us.

Puerperal examinations to prevent retroposition, which is found most frequently in the first four months of post-partum life, are necessary. 72% of such cases can be successfully treated by the pessary.

In this paper, I have discussed obstetrical difficulties from the stand-point of prevention. The various operations which gynecology offers for the relief of obstetrical difficulties—perineal repairs, suspensions, caesarean section, abdominal and vaginal, hysterectomy, pubiotomy, episiotomy, and others, I have not discussed. Each is a subject in itself. They would be required less frequently if prenatal care, better obstetrics, and puerperal examinations were more thoroughly practiced.

## DISCUSSION

DR. G. FRASER WILSON (Charleston): The first thing I would like to call to your mind is the use of whole ovarian extract on some of these women. We had a patient some years ago with a prolapse—we used whole ovarian extract and she had her first baby shortly after its administration.

I want to emphasize what has been said about tuberculosis. I think that is a splendid idea to make it impossible for these women to be mothers.

I cannot agree as to infection following eclampsia in such a large number of cases. In a paper I read two or three years ago I stressed infection following eclampsia, but such is not my experience, and we find a great deal of eclampsia.

I want to bring to your attention a few facts to show that we do not all translate English alike. I thought from the title of Doctor Tylers paper that the idea was a discussion of gynecological operations that give us obstetric difficulty. I think a few words along that line would be a help. You do not often have obstetrical difficulties today following abdominal operations. The surgeon no longer fixes the uterus as he used to do, and only in some old woman who was operated years ago do we find the anterior wall of the uterus fixed. That is not often done.

Then I want to call your attention to excessive curretting. We had a patient the last two or three weeks who was in a distressing condition. She expected to become a mother in a few days and had taken a large dose of castor oil that morning following by repeated bowel actions, and then she began to vomit. Toward evening the vomiting became severe and she suddenly collapsed and was sent to the hospital. It was evident she had lost a great deal of blood. I knew I had to go into that abdomen and I thought for ruptured bowel, but we found a ruptured uterus not in labor—a very rare case. We took the uterus out and she made an uneventful recovery. The

placenta had gone clear through the uterus and caused it to rupture in the process of vomiting.

The average surgeon thinks the tighter he can make the vaginal orifice the better the operation, and in order to do that he takes off as much vaginal mucosa as he can. I have seen them take off 2 1-2 cm of vaginal mucosa. That gives the woman all the trouble in the world—and does not cure her.

### DISCUSSION

DR. G. T. TYLER (closing): I have very little to add except to say that I think this has been a very profitable discussion.

In giving the large amount of data I have collected I have simply stated facts. You can draw your own inferences. Of course we know that in most of our cities about one-third of the cases are delivered by midwives. Probably there is an equally large percentage in the rural districts. That of course affects the statistics and shows where the blame lies. But the facts are here and it is ours to educate the people.

As I said, prevention is the keynote. The time is ripe for us to make an effort to have prenatal clinics in our communities. We need them sadly and we will never improve our results until we have such organized effort.

### SURGERY IN DIABETES MELLITUS

*By R. L. Sanders, M. D., F. A. C. S.,  
and J. P. Henry, M. D. of Mem-  
phis, Tenn.*

Surgery has always had a serious aspect. During this generation its usefulness and comparative safety have greatly increased the number of operations performed in this country and abroad. In the minds and hearts of a great many surgeons the thought is gradually arising that the pendulum has swung most too far and a higher percentage of patients are being subjected to surgical treatment than the results justify. Many conditions are being treated medically that were formerly considered surgical. The advent of radium and the X Ray has changed our plans in the treatment of many diseases, especially the malignancies. We are in full accord with many others who believe that cancer of the cervix is no longer a surgical disease, for it can be treated with radiation with better final result and lower mortality. Many benign conditions of the uterus have also been taken off the surgeon's list and given over to the radiotherapist. But, used early and with discretion and proper judgment, there is nothing so brilliant as the surgical conduct of many cases.

Read before the South Carolina Medical Association, in Symposium on Diabetes, April 16, 1924.

If we agree with Joslin (and we believe there is none better) and say that diabetes is a disease in which the secretion of the islands of Langerhans is deficient and, as a result, the normal utilization of carbohydrate is impaired and glucose is excreted in the urine, then we are confronted with a great number of people who are called diabetics. Most men writing on the subject today are unanimous in asserting that diabetic patients more frequently require surgical operations than the same number of non-diabetics. Reviewing the literature, we find that from 11% to 15% of all hospital patients admitted with a diagnosis of diabetes mellitus are operated on for some surgical disease of complication. It is estimated that one million people in the United States are afflicted with diabetes mellitus. If we operate on an average of 12% of them, 120,000 people annually are subjected to one or more surgical procedures in the natural course of this one disease. Therefore, we are face to face with a momentous question in speaking on this subject, the surgery of the diabetic patient.

In an article by Seeling (1913) we note the scarcity of citations in literature on this remarkably important subject. Up to that time only about one hundred references were made to the surgical indications in

diabetics. It behooves all surgeons now as never before to acquaint themselves with this subject. We should be able to measure the worth of statements, such as the one by Sternberg who said, "Any necessary operation may be performed with safety on a diabetic." And at the same time Lepine comes out with a counter opinion, that every operation is contra-indicated in a diabetic. Somewhere between these two extremes we now stand.

Surgeons are accustomed to classify operations into major and minor, terms which we all understand. Many statistics in hospital reports give a higher mortality in minor than in major operations, but this is probably due to the fact that major operations are not attempted in many cases where under the same conditions minor work would be done. Likewise, diabetes is graded as mild, moderate and severe. Foster has aptly said that glycosuria is not a reliable guide in the estimation of the severity of diabetes. The diagnosis and severity of the disease depends upon the degree of hyperglycemia under varying conditions of diet. He also calls attention to the fact that the disease may exist for some time and renal degeneration occur. In time it is noted that glycosuria abates and the patient is apparently cured. Blood estimation of the sugar contents will reveal hyperglycemia with a high renal threshold. If the surgeon depends solely on the urine examination, he will occasionally operate on a real diabetic in a state of aglycosuria. Every community, every hospital and every clinic should be equipped to do blood chemistry, especially to estimate the amount of blood sugar, for it is by this means only that we have an accurate guide in the management of this group of cases.

#### FACTORS FAVORABLE TO SURGICAL SUCCESS IN DIABETICS

1. Early diagnosis and early decision to operate.
2. Adjustment of the diet to the surgical requirements.

3. Use of insulin.

4. Choice of an anaesthetic.

5. A certain degree of experience, skill, speed in operating, gentleness in the manipulation of tissues and a minimum amount of trauma.

6. Absolute cleanliness, asepsis and, to encourage primary healing, the avoidance of drainage of wounds.

1. *Early Diagnosis:* Surgeons and internists alike are becoming more optimistic about subjecting diabetic patients to the necessary physical, mental and brain trauma incurred during the course of a general anaesthetic and a surgical operation. Joslin says if surgical delays are dangerous under ordinary circumstances, in diabetes they are *disastrous*. The mortality is influenced materially by the time of operation. If we can get the patient safely through the surgical ordeal, the diabetes can then be treated for an indefinite time. Hitherto this was not possible for we could not adjust the medical treatment to the operation. The proper use of insulin has bridged this gap.

2. *Adjustment of the diet to the surgical requirements.* This depends principally upon the urgency of the case, its severity and the age of the patient.

*Urgency:* If the case be one of acute appendicitis, intestinal obstruction, perforated ulcer, twisted pedicle, or any serious urgent abdominal condition, or possibly the amputation of a limb because of accident or from other cause, little can be done preoperative in the way of diet. There will be an inevitable rise of blood sugar and a depletion of alkali reserve during the operation. When the patient is seen, a blood sugar estimation should be done within an hour at least. If this is not possible, a rough quantitative estimation of sugar and acid bodies in the urine can be quickly done. If a marked hyperglycemia or glycosuria exists then the largest possible dose of insulin that can be safely given should be administered just prior to the operation. Internists disagree on the advisability of using glucose at the same time. We do not give it. If an overwhelm-



ing infection, such as peritonitis, does not exist, our medical associates can begin treatment immediately postoperative, and within a remarkably short time the blood and urine will be down to normal limits. Proper diet and insulin carefully given at this stage are of paramount importance. The diet through convalescence will depend somewhat on the nature of the operation; that is, if it be a stomach, intestinal, amputation or other type of operation. The diet should be selected with the lowest carbohydrate values and the insulin doses governed accordingly.

**Elective operations.** Disabling hernias, bleeding fibroids, hemorrhoids, gall-stone disease, breast tumors (benign or malignant), ulcers of the stomach and duodenum, tonsils that are foci of infection, and many other common surgical diseases may be operated upon with a reasonable margin of safety in diabetic patients when the case is not urgent. The patient is brought to the day of operation upon a diet as nearly normal as possible for the age, weight, etc., the ideal being a sufficient number of calories and a sugar free urine and blood sugar content and alkali reserve in normal limits. The anaesthetic and operative shock, no matter how trivial, will lower the tolerance and tend to coma and acidosis. Careful watching is very necessary at this stage. Routine postoperative orders are worthless. They should be adjusted to the case in terms of symptoms and blood and urine findings as they arise.

**Severity of the disease.** If the alkali reserve of the blood is below 40 c. c. of carbon dioxide per 100 c. c., or the hyperglycemia great, a little delay may be life-saving. Foster thinks such a condition incompatible with life in the face of an operation. We believe there are very few cases today in which the alkali reserve cannot be raised by the proper use of insulin and diet. Coma that has existed twenty-four hours or more and overwhelming infections occasionally render even insulin inactive, but these cases are in the minority. Elderly patients, especially if the case be of long standing, do

not lend themselves well to sudden changes in diet. They should be brought to operation on as nearly normal diet as possible to maintain resistance.

3. *Use of insulin.* The majority of our cases not subjected to operation are handled successfully without the use of insulin. We use it only in the severe cases that do not progress satisfactorily on proper diet and in practically all cases with surgical complications requiring operative intervention. We notice that even if the patient had been taking it previously, larger amounts of insulin are required postoperative. If infection of any marked degree exists, large doses will be required over a longer period of time. As the infection subsides the insulin will be more effectual. This was quite strikingly brought out in two of our cases, one with a gangrenous infected foot which was operated upon and the other a case developing acute pyelitis. Fifty-five units daily was given each of these patients for some time. Eventually it was discontinued and the diet controlled the condition very satisfactorily.

4. *Choice of an anesthetic.* Surgeons should know the life history of the disease in order to balance a risk of operation in any given case. And, if operation is necessary, they must be familiar with the effects of different anaesthetics and operations on diabetic patients in order to expose them to the least possible danger. There is a unanimity of opinion that ether is the most harmful anaesthetic and the one to be most generally avoided. Bloor believes that the blood ether mixture increases the solubility of fatty substances in the tissues and brings about a higher concentration of blood fats. Sansum and Woodyatt show that ether produces an immediate hyperglycemia by breaking down the liver glycogen and transforming it into sugar. Nausea and vomiting prolong the interval before food can be taken, temporarily lessening the amount of urine output and increasing the concentration of sugar and acetone bodies. With the use of insulin, many cases are now being successfully carried through an operation

with ether as an anaesthetic, whereas they would have proven fatal in former days. Gas-oxygen or ethylene are quite satisfactory when used in conjunction with other drugs as the synergistic type of anaesthesia. By common consent these seem to be the choice of most surgeons now.

We do not use spinal anaesthesia although some surgeons think well of it. Local infiltration, especially the sacral and caudal type of anaesthesia, has been most satisfactory in our hands. In all rectal, bladder, prostate, perineal, and cervical operations, we are using it by choice whether the patient be a diabetic or not. The operations are painless, the patients can take fluids and nourishment immediately, and the dangers of pulmonary and other complications secondary to inhalation anaesthetics are practically eliminated.

5. *A certain degree of experience, skill speed in operating, gentleness in the manipulation of tissues, and a minimum amount of trauma during the operation.* Comment seems unnecessary here. We realize that trained surgeons with proper assistants can shorten the time of operation several minutes in most cases, and it is quite possible that serious trouble may be averted in this way. While visiting a certain clinic a few months ago, I was struck with the rough manner in which the surgeon handled the tissues. When we were outside, my companion (a surgeon from another city) remarked that he had never witnessed such a display of "traumatic surgery" before. Dr. Crile has been accredited with the expression that one should handle the tissues "lovingly," and I know of no place where such a procedure would be more apropos than during the course of an operation on a diabetic patient. If one can absolutely prevent infection, a clean surgical wound should and will heal as kindly and quickly in a diabetic as a non-diabetic patient. But if the tissues are traumatized by undue manipulation and thorough hemostasis is not secured infection—the more serious thing that

could happen—is quite likely to occur, and thereby jeopardize the life of the patient.

6. *Absolute cleanliness, asepsis and, to encourage primary healing, the avoidance of drainage of wounds.* Immaculate technic should be practiced during the performance of operations on diabetic patients. If poor technic, dirty hands and instruments are dangerous under ordinary circumstances, they are disastrous here. Drain tubes tend to invite outside infection and if it is safe to close without them, they should not be used in operative wounds of diabetic patients. A great many surgeons who are routinely draining cholecystectomy cases ordinarily are closing them tight in diabetics. It seems a good place to practice the dictum, "When in doubt don't drain."

*Carbuncles.* Promptly treated, carbuncles usually do well. The advent of the infection lowers the tolerance immediately and urgently demands surgical treatment. Cases properly treated when first seen or very early in the course of the disease usually get well promptly. The high mortality results from the neglected cases whose tolerance is quite low. We have learned our lesson in the treatment of acute appendicitis and today no physician thinks of delay when such a diagnosis has been made. The laity has been so well educated that they almost demand prompt surgical intervention. A few weeks ago the wife of a patient of ours called over long distance telephone and wanted to bring her husband thirty-miles through the country for operation at two o'clock in the morning, fearing a ruptured appendix and its dire consequences. If we could learn to act with equal promptness when a diabetic patient develops a carbuncle many would be saved. One should not wait for the carbuncle to get "ripe," but institute treatment at its first appearance.

The accepted procedure in the past has been a crucial incision, curettage, the application of phenol and moist dressings. We have been excising the entire infected mass, using the knife or canter, preferably the latter. The infection in most cases can be

controlled by the use of hot boric or permanganate packs or Dakins solution and frequently changed dressings. Skin grafting has not been necessary in any of our cases. Carbuncle is still a most dreaded of all surgical complications of the diabetic.

*Gangrene.* This complication is more common in men than in women. It is likewise a disease of elderly people, probably on account of the prevalence of arteriosclerosis in the aged. It is seldom seen in the young, nor is it common in the early months of the disease. It is frequently fatal in cases past seventy years of age. Gangrene could frequently be prevented if, before its appearance, the same diet and other measures of treatment were used as are instituted after its development. All trauma, abrasions, etc., should be carefully avoided. A recent writer has aptly said that to avoid gangrene a diabetic should bathe his feet as carefully as he does his face. He refers also to the Japanese, who wears thick socks and sandals and who do not have gangrene.

*Indications for operation in gangrene.* Severe pain may make amputation imperative. The dry, non-progressive type may be treated by heat and the use of all medical measures, but the moist gangrenes usually demand immediate amputation. Tourniquets should be avoided and the leg amputated below the knee if possible. We know of no more fitting words with which to close this paper than those from Joslin's recent book. He says, "If the beginning of gangrene were as noisily ushered in as an attack of biliary or renal colic, the results of treatment would be far different. Death from gangrene today is usually the result of procrastination on the part of the physician and the patient." Surgery seldom deserves, but usually receives, the blame for the fatal issue."

The following case reports are a few selected from our records and used to show some phases of diabetes, especially the surgical complications. The high renal threshold with aglycosuria and hyperglycemia, mild chronic diabetes of long standing,

major surgical procedures and the use of insulin are some of the notable features.

#### CASE REPORTS

Case No. 1. Mrs. M. L. N., white, age 60, height 66 inches, weight 186 1-2 lbs. Mother of several children. Came to the clinic Oct. 24, 1922. Chief complaint, attacks of epigastric pain, which radiated to the left, extending over a period of three weeks. Severity of pain sufficient to require morphine for relief. Nausea and vomiting present. Moderate jaundice the first few days and associated soreness across the entire upper abdomen. No chills. A long standing history of indigestion of the qualitative food dyspepsia type. Three days ago her home physician found a large, tender epigastric mass, filling the upper abdomen and slightly movable. The physical examination was otherwise practically negative. Urine negative. Leucocytes 11,800 with polys 85%. Provisional diagnosis was pancreatic cyst with infection.

Operation: Gas-ether anaesthesia. Upper right rectus incision. A large, semi-fluctuating mass was found in the region of the pancreas and filling the lesser peritoneal cavity. Incision was made between the stomach and colon and about two quarts of pus evacuated. Large tubes were used for drainage. Convalescence stormy the first few days but then she went on to complete recovery. It was necessary to keep the tubes in site five months. Gall-bladder subacutely inflamed and filled with stones. Condition too acute to warrant further operation. Eleven months later patient returned for further observation. Wound healed. She has gained weight and her general health is good except for an occasional attack of epigastric colic. Urine now shows sugar 2 plus. The blood sugar 373 mgs. per 100 c. c. Put on diet without the use of insulin weight reduced from 186 to 173, urine sugar free and blood sugar dropped to 137 in a few days. Patient remained under observation two months and condition continued good.

This case represents the usual results of



pancreatic destruction in sufficient amount to produce diabetes. The degree of severity depends to a great extent upon the amount of pancreas destroyed and the treatment afterwards. Just before the discovery of insulin we had a similar case except more pancreas was destroyed. The patient did not adhere to proper diet and after a day of gormandizing, including a large amount of fat, she developed acidosis which was rapidly followed by coma and death. If we had been able to give her insulin, it is probable that the result would have been different and she might have been alive today.

Case No. 2. Mrs. L. M., white, widow, age 61, weight 180 1-2; came to clinic May 11, 1923. Chief complaints (1) Lump in right breast of 12 months duration. (2) Sugar in urine. (3) Burning and itching about the vulva. Bowels constipated, some thirst, frequent urination, some shortness of breath and occasional dizziness and spots before her eyes. Physical examination: (a) A hard, fixed, non-ulcerating tumor at inner lower margin of right breast. Definite carcinoma, probably inoperable. (b) Vulva and external genitals red and inflammatory, wide laceration of perineum, with rectocol cystocele and third degree uterine prolapse. B. P. 140/80. P. 78. She had been on a diet two months and at this time urine was sugar free. Blood sugar 204 mgs. per 100 c. c. After six days treatment it came down to 154. At this time a series of X-Ray treatments were given over the right breast and axillary space. She then developed an acute bilateral pyelitis and cystitis with chills, fever and prostration. Urine quickly showed sugar 4 plus and the blood sugar rapidly rose to 181, then to 226 and finally to 312. She entered the hospital for treatment. The kidney pelvis were lavaged and 1% silver nitrate solution instilled every second day until infection was controlled. During this time large doses of insulin were required to control the hyperglycemia and glycosuria. As the infection subsided, the dose was reduced and finally discontinued. She remained in the

hospital two weeks. Three weeks later blood showed 150 mgs. per 100 c. c. and the urine was sugar free. She received bladder irrigations every second day at the clinic. Two months later she re-entered the hospital on account of the distressing cystocele and prolapse. After fasting the morning before the operation, the blood sugar was 108. Insulin and dextrose were given before she went down to the operating table. Blood sugar was down to 80 and urine negative.

Operation: Gas-oxygen anaesthesia. Vaginal hysterectomy and perineorrhaphy were done. She stood the operation well and no alarming rise in blood sugar and no acidosis. Wound healing was perfect and convalescence no way different from the average non-diabetic patient. After the lapse of two months, the breast carcinoma was treated with radium needles buried in the tissue about it. No reaction. The tumor has practically disappeared and she has received several series of X-Ray treatments about the breast and axilla, which has controlled the condition entirely. It has been eleven months since she first consulted us. She is entirely relieved of all her complaints and general health is good.

*Special features* of this case are (1) high renal threshold in an elderly patient with chronic diabetes, (2) the importance of blood sugar determination instead of relying on urine examinations. (We are sure many cases of hyperglycemia and aglycosuria are passing through hospitals and clinics undetected almost daily). (3) the disastrous effects of infection in diabetes. (4) The successful conduction of a patient through a major surgical operation in an elective case where infection was not present.

Case No. 3. J. H. M., white, male, age 73, widower. Height 5ft. 3 in., weight 137 1-2 (weight 5 years ago 163 lbs.) History: Able to do regular work until three years ago when disability was ushered in by weakness, increased thirst and appetite, and frequent urination. Diagnosis at that time was diabetes. He does not know how long this condition had existed. Ten days ago he felt

like a corn was developing on his right great toe. Two days ago noticed a purplish black spot, painless. Some swelling, redness and tenderness on dorsum of foot.

Physicial examination and laboratory findings at the clinic: An aged man fairly well developed and nourished. Moderate opacity of both lenses, some degree of arterio sclerosis, right foot swollen, red and tender. On the right great toe was a purplish black discoloration, with three perforations, two on the top and one on the bottom. A sero-sanguinous discharge from them all. No distinct line of demarcation. Urine: sugar 4 plus, albumin 1, hyaline casts 2, granular casts 3, pus 1, acetone 4. Blood sugar 317 mgs. per 100 c. c.

Patient sent immediately to the hospital and put on a maintenance diet and insulin. The following day only trace of sugar and acetone in all urines. The second day the toe with the head of the metatarsal bone was amputated with gas-oxygen anaesthesia. Five days later blood sugar was 181 with still a trace of sugar and acetone in urine. Convalescence very satisfactory but urine contained trace of sugar and acetone the first week in spite of 50 units of insulin daily. Slight infection of the wound with slow healing. After the first week urine became sugar free but acetone remained one month. Infection then controlled, acetone disappeared, insulin reduced in amount and finally discontinued. Diet increased. Blood sugar came down to practically normal. Urine was sugar and actone free, and he was discharged in good condition three months after admission.

*Features of- the case.* (1) Mild, long standing case of diabetes. (2) Arterio sclerosis, gangrene and infection made the use of large doses of insulin imperative. (3) After infection and gangrene were controlled, insulin was discontinued and patient returned to fairly liberal diet. (4) The three months in the hospital on insulin and diet with resultant pancreatic rest was quite an economic saving in spite of the time and money spent.

Case No. 4. Mrs. A. B. S., white, widow, age 57, height 5 ft. 6 1-2 in., weight 178. Came to clinic Jan. 22, 1924. Chief complaints: (1) Dark purple blisters on first and second toes of both feet; (2) pain, numbness and slight swelling in both feet and legs; (3) easily fatigued; (4) polyuria. History: Eight years ago lost considerable weight and has not felt well since. At the onset had infected corn and nail came off right great toe. Muscular weakness and numbness of both extremities. No increase of thirst and appetite until four years ago. Painless, slow healing of blisters on both feet the last three winters. Consulted her physician nine months ago and he found sugar in the urine and put her on a diet. (Diet consisted of toast and corn bread, prunes, half a gallon of buttermilk daily, meats, eggs and vegetables.)

Physical examination: Well developed and nourished but slightly obese woman. Not suffering and not acutely ill. Teeth in fair condition but several absent. Soft systolic aortic murmur. Large ruptured blisters on both great toes but no other discoloration. Smaller blebs on both second toes. No pain. Dorsal artery pulsates. B. P. 180/90. P. 100, T. 99. Urine 1029, acid, albumin 0, sugar 3 plus, microscopic negative. Wassermann negative. Blood sugar 348 mgs. per 100 c. c. Diagnosis: (1) diabetes mellitus, (2) gangrene of toes, (3) arterio sclerosis. Patient sent immediately to the hospital. No supper. 10 units of insulin given at 7 P. M. At 9:15 urine showed sugar 2 plus. At 11:10 P. M. sugar was negative. 10 units of insulin given at midnight. No food. Diabetic acid and acetone absent. 7 A. M. next day blood sugar 146 and urine sugar free. Put on diet and insulin discontinued. She had developed a high renal threshold and the blood sugar gradually rose to 266 while the urine remained negative. Put back on 10 units of insulin daily half hour before meals. Blood sugar came down to and maintained a level of from 117 to 130. Condition of toes improved under dry heat. Discharged from

hospital in 18 days. Since then toes have entirely healed. She is now on adequate diet to gain in strength and slightly in weight but insulin is not required. During the past twenty days five blood sugar estimations have been done which show 138, 142, 150, 142 and 142 respectively. There is some swelling of the feet and ankles but is probably due to her varicose veins. N. P. N. and urine examination within normal limits and no sign of nephritis. No sugar in urine since first dose of insulin.

*Features of the case.* (1) Mild diabetes of long standing with high renal threshold. (2) Arterio sclerosis including the kidney vessels. Sugar spills over somewhere between 268 and 348 mgs. per 100 c. c. (3) Urine examination alone had been done prior to entering the clinic and hence a sense of false security to both patient and physician when urine was persistently negative. (4) Patient was taking large quantities of buttermilk on advice of her doctor, when sweet milk had been banned, (One glass of sweet milk contains 12 mgs. or 180 grs. of sugar. One glass of buttermilk contains 10 1-2 gms. or 175 grs. of sugar.) 5 Insulin is necessary when infection and gangrene are present but could be discontinued when these cleared up.

Case No. 5. Mrs. M. K., white, widow, age 61. Chief complaints: (1) Drowsiness and a tendency to go to sleep when sitting. (2) Loss of weight. (3) Pain in back to left of spine and under right shoulder. History: She has known of sugar in urine for 15 years, at times as high as 10%. Seven years ago a small tumor excised from right breast, reported adenocarcinoma, but on account of the diabetes the doctor advised nothing further unless she had a recurrence. Six months later a small nodule appeared at site of former operation and we did a radical amputation of the breast under ether anaesthesia. Diet was carefully watched but nothing further done at that time. No acidosis and no coma developed. The wound healed kindly and quickly. At that time one of us (R. L. S.)

entered army service and the patient was not seen for a year and a half. In the interval she reported the urine sugar free most of the time. Feb. 3, 1920, a little more than four years ago, she came down with an acute gall-bladder attack, demanding immediate operation which was done. Cholecystectomy was performed for acute cholecystitis with stones. The head of the pancreas was hard, nodular and showed marked evidence of chronic pancreatitis. Exploration otherwise negative. Convalescence smooth and the wound healed by primary union. Two months later urine showed presence of some sugar. Two and a half years later she came to clinic because of drowsiness, loss of appetite, etc.

Examination: Urine negative. Blood sugar 270 per 100 cc. On diet two weeks and it dropped to 115. Drowsiness improved correspondingly. She remained a while on the diet but after a season of good feeling broke over and ate freely. Blood sugar rose to 240 and urine negative. On 15 days treatment it came down to 133. From then on to the present time she has kept it down, has gained 21 lbs. and feels very well.

*Features of the case.* (1) Very long standing (probably 15 years) chronic, mild diabetes. (2) A remarkable resistance and tolerance developed. She was able to "get by" again and again after the warnings which came to her. (3) The conduction of the diabetic through two major surgical operations under ether anaesthesia without acidosis or coma. (4) High renal threshold.

DR. N. B. HEYWARD: Columbia, S. C. I was glad Doctor Sanders brought out the things he did in connection with the blood sugar, apparently getting no results from insulin. We have seen a number of these cases at the hospital, cases that have a mild infection and diabetes, and almost anything you give them seems to have little effect on the blood sugar. They continue to run a high blood sugar content until the infection is controlled, and then it drops. A recent patient was apparently doing very well except



that the blood sugar was high. I insisted that there was a pus pocket somewhere. The patient did not improve until we found the pocket and drained it, and the blood sugar immediately dropped.

DR. R. LEE SANDERS (closing): In the average run of cases we do not use insulin at all—proper diet handles the case. But in cases in coma and where an emergency

arises, then it is certainly a life-saving proposition.

Another point that has been brought out is the influence of infection. I want to re-emphasize the importance of early decision to operate when you find a surgical condition. The fewer hours intervening the better. That is a thing we insist upon.

I want to thank you for the privilege of coming before you today.

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

### THE TREATMENT OF RODENT ULCER OF THE CORNEA

Carl Thier, Arch. f. Augenhk., Munich, 94: 95, No. 1, 1924.—Abstracted in International Survey of Ophthalmology, May 1924.

Rodent corneal ulcer is a malignant affection, but can, according to Fuchs, always be cured by the actual cautery. In literature, as well as among cases of his own practice, Thier has found that this is not always so. Cases in which one eye becomes affected after the others are especially prone to an unfavorable ending. The author reports a case: After a severe attack of grip, the patient developed a rodent ulcer in the right eye; notwithstanding cauterization and other treatment, complete necrosis of the cornea and blindness resulted. A short time after, the left eye developed the same malignant form of rodent ulcer, which would have resulted in the destruction of the second eye had not the author at the last moment decided to cover the entire cornea with conjunctiva by aplastic op-

eration. On the second day symptoms had almost disappeared, indicating a favorable course of the disease. Three weeks later the sutures began to tear away and the intact iris and cornea could be seen through the gap; the eye had been saved. In several cases of severe ulceration and injury the author had previously obtained very favorable results with this method of wrapping the entire anterior segment of the eye in conjunctiva.

The conjunctiva flap is not a new treatment, but cases of favorable results from its use are of sufficient interest to make us note them. I have used it with no success in some cases. I have found this method of treatment more successful in closing severe corneal injuries. The reason why I am not reporting it is because that method in this case seemed to have saved the remaining eye. I had a case like that some time ago. The remaining eye came out of it with poor vision, but enough for the patient to get about with. I am wondering if I would had gotten a better result in that special case if I had used the flap.

## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### ACUTE PANCREATITIS

L. F. Smead of Toledo, Ohio, in the American Journal of Obstetrics and Gynecology, April 1924 gives a most illuminating account of acute pancreatitis.

He states that there is the acute hemorrhagic type, spoken of, as pancreatic necrosis, not essentially inflammatory, and that there is the so-called acute pancreatitis, which is inflammatory in origin, and which may or may not suppurate.

He cites 4 very interesting cases which he has personally had under treatment. One died and three recovered, operation being resorted to in each.

In acute inflammatory pancreatitis the infection reaches the pancreas through the lymphatic system from a diseased gall bladder or peptic ulcer. It also may reach it through the bile duct, or from the duodenum up through the duct of Wirsung or Santorini, or it may be transferred through the blood stream from some distant focus, e. g. tonsil, sinus, prostate, etc.

Acute hemorrhagic pancreatitis is a sudden massive necrosis of a goodly portion of the pancreas. The peritoneal cavity soon collects bloody fluid and in the fat about the pancreas and adjacent tissues necrotic areas are seen.

Pancreatic necrosis is supposed to be the result of the action of trypsin on the pancreatic tissue itself. In the pancreas itself, trypsin as such does not normally exist, but its fore runner trypsinogen does. In the duodenum under normal conditions this substance is converted into trypsin by the action of enterokinase.

Infected bile or duodenal contents has been thought of as possible etiologic factors, but there are those who rather doubt that these

substances can push back and up through the duct into the pancreas itself.

Infections substances or micro-organisms entering the pancreas through the blood or lymphatic system from the appendix, tonsil, sinus, gall bladder or elsewhere have been thought to liberate a substance capable of activating trypsinogen into trypsin.

Gall stones are present in a large percentage of cases of pancreatitis.

The diagnosis is usually made at the operating or autopsy table. In acute abdomens, where urine examination reveals sugar pancreatitis should be suspected.

The cases may be mild or severe, and it is the mild ones which are usually overlooked. The tendency not to operate on acute cholecystitis has been the cause of not finding many of these cases, as they are usually mistaken for that condition.

There are no pathognomonic signs or symptoms of pancreatitis inflammatory or necrotic.

In the necrotic type the pain is sudden, is overwhelming, is usually to the left, and though constant, yet its intensity varies. If the tail be involved the pain may be in the left costo-vertebral angle.

The abdomen is usually flat, but with little tenderness if seen before generalized peritonitis sets up.

The treatment of acute hemorrhagic or necrotic pancreatitis is surgical, the idea being to form an outlet for the toxic substance and fluids by means of the drainage tube. The lesser peritoneal cavity should always be drained. Should recovery take place, recurrence should be prohibited by the removal of the offending viscus.

If the patient's general condition permits gall bladder drainage should be instituted and stones removed if present.

Many cases of the simple inflammatory variety recover spontaneously. Operation in such case frequently is not necessary.

Should a localized suppurative process occur, the pocket or abscess should of course be drained at once.

## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

### THE DIAGNOSTIC HAZE OF RENAL TUBERCULOSIS.

The diagnosis of renal tuberculosis is rarely made during the first two or three years, of its existence and often not until it has given leading symptoms for months or years. Before the true nature of the condition is discovered many patients have been for so many months in a state of chronic invalidism, with uncomfortable days and miserable nights, that they are poor operative risks and if they do regain health, it is after a long, trying convalescence.

The general impression as to the rarity of renal tuberculosis is hardly supported by its frequency at autopsy. In 12,688 autopsies collected by Ke'ly and Burnam, without regard to physical condition, it was revealed in 603 or 4.7%. In 312 autopsies upon children under twelve years it was found in 49 or 15%. In 72 children with active tuberculosis it was present in 68%. It was unilateral under 12 years of age in 32% and in from 50 to 55% over 12 years.

With the exception of miliary tuberculosis the renal lesion is almost invariably unilateral at its beginning and it is often a number of years before the other kidney is involved. This is strikingly brought out in the above figures showing that even as late as autopsy it was unilateral in 32% under 12 years and from 45 to 50% over that age. When one considers that unilateral renal tuberculosis, providing there are no serious contraindications, is a surgical condition and never a medical one and that in early operations the

mortality is very low and the prognosis is good, he will be convinced that there is ample reason for a strong plea for earlier diagnoses.

So many of our medical ideas have been handed down to us from what we might call the "clinical age" and have lived so long since our instruments of precision demonstrated their fallacy as to make it obvious that constant progressive revision of diagnostic value is necessary to safety. In no branch of medicine is this more true than in that of urology. Cystoscopic methods have brushed aside a host of our older beliefs and shown us that symptomatic diagnoses based upon former clinical teachings were more often in error than otherwise. This being true, it is plain that there is need of discussion likely to reveal the most common factors leading to our failure to discover renal tuberculosis before both kidneys are involved so that the patient may have the benefits of surgical help.

Probably our most usual stumbling block is the idea that has drifted down through the years regarding cystitis. The more one studies the interior of the urinary tract the more convinced he becomes that, left to itself, the urinary bladder is one of the best behaved organs in the body. Inflammation of its mucosa is in almost every case the result of some condition extrinsic to its cavity. If conditions of the lower tract, such as tuberculosis of the prostate, stone, neoplasm, diverticulum, gonorrhea and the various types of obstruction which prevent the proper emptying of the bladder are ruled out,



a persisting systitis is almost invariably due to some renal lesion.

Another frequent cause of the lateness of our diagnoses is the far too common acceptance of the colon bacillus as the causal agent of a pyuria. It would be a very good plan if we viewed with a great deal of skepticism the power of this germ to do all the things to the urinary tract that have been attributed to it. A careful search for the tubercle bacillus in our cases of so-called colon bacillus pyelitis, particularly in males, will reveal most of them to be infections superadded to a renal tuberculosis.

The unfortunate and rather widely spread custom of treating hematuria with drugs and rest without really determining the source and cause of the bleeding is a very common reason why these cases are not discovered. No case of bleeding from the urinary tract should be thus dismissed for it is extremely rare to find that such bleeding is not caused by a lesion of gravity which will, if uncorrected, cost the patient his health or his life.

The same might be said of pyuria. Pus does not belong in the urine and guesses as to its source are hardly good practice.

A fact well worthy of mention is the decided tendency upon the part of some gynecologists to perform plastic operations for the relief of pyuria and cystitic symptoms without first proving that the pus is not of renal origin. An unfortunate number of these women are not benefitted because the real cause is a renal lesion to which the vesical symptoms are secondary. In fact, it is rather rare to find a tuberculosis of the kidney in a woman who has borne children and has not had one or more such operations.

While the final study of these cases can be made only by cystoscopic procedures the existence of renal tuberculosis can generally be determined by clinical findings and the microscope.

Because of confusion of symptoms it is well to fix in our minds certain points that are highly suggestive of early renal tuberculosis and consider patients present-

ing them under suspicion and worthy of the closest observation and study.

The most common symptom of early renal tuberculosis is burning in the bladder region, or along the urethra during urination. There are a number of conditions that can cause this symptom but in the absence of gonorrhea and marked oxyluria tuberculosis accounts for the greatest number. In tuberculosis this symptom may appear when the urine is perfectly clear and there are no other symptoms. It varies from a very slight burning sensation without any urinary frequency to the intense scalding and frequency of the markedly tuberculous bladder. It must not be thought that every such patient is tuberculous but all of them are worthy of very close watching, particularly if there is a non-gonorrheal pyuria.

Pyuria with or without those classical symptoms of cystitis, vesical discomfort and frequency, is another extremely common presenting symptom. Every case of pyuria is deserving of the closest study for tubercle bacilli. It is surprising how often a careful search of these urines will reveal this germ.

Given these two symptoms, burning and pyuria, (with or without frequency of urination,) in the absence of lower tract obstructions and gonorrhea and one can reasonably anticipate proving tuberculosis in the greatest number of such patients.

In this plea for the earlier diagnosis of a lesion that, allowed to remain terminates in the destruction of the kidney first infected, usually the involvement of its fellow on the opposite side, the continued ill health and commonly the death of the patient, one can be pardoned if he repeats, for purposes of accentuation, certain points. If, herefore, we view with suspicion burning in the lower urinary tract that is not explained by other conditions, pyuria that is non-gonorrheal, hematuria of any type, doubt the colon bacillus as a primary infecting agent, just fail to consider cystitis as other than a symptom of some other condition and refuse to believe that every pain in the back is myalgia we

shall have travelled far and gained much for the relief of our patients.

This article is contributed by invitation by

1. S. Pelouze, M. D. Genito-Urinary Department, University of Pennsylvania, Philadelphia.

## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

In this state during the past month, two of the outstanding diseases among Children have been Infections Diarrhea (Colitis) and Whooping Cough. Nothing new in the literature that seems practical as to the former has come to my attention, but there have been several articles concerning different aspects of the latter. While many of the profession still concern themselves too little about whooping cough (which because of its high incidence and fairly high secondary mortality is worthy of attention) yet among some there is evidence of a desire to better our attack upon this malady.

Henry Heiman in the Archives of Pediatrics (June 1924, p. 385) gives a clear and succinct report on the "Clinical value of the routine examination of blood smears in the diagnosis of Pertussis." 300 cases in all were studied. As he truly says The "difficulty of early diagnosis" is a serious obstacle to the limitation of the spread of whooping cough. In his work he made differential leucocyte counts on his private cases grouped as to their being clinically positive; suspicious, which proved subsequently positive; and suspicious, later declared negative. In the group that was unquestionably positive, numbering 124 cases, who had a history of exposure and the characteristic cough, 65. 5% showed definite lymphocytosis. In the second group numbering 84; 82% showed the lymphocytosis, which along with the suspicious cough warranted advising isolation. Of the group that later proved negative comprising 57 individuals, who were seen 2 weeks after the onset, only 17% had an increase in lymphocytes. 35 cases

were excluded as being unsuitable for statistical purposes as they could not be followed up. This method of diagnosis is by no means as definite as we should like, but certainly as the author states, "It is simple and rapid and may be employed in the routine examination of all suspicious cases"

In the hands of many the vaccine therapy of whooping cough has been a great disappointment, and for that reason attempts are being made to find some more certain remedy. The treatment by means of the X-Ray is still sub judice and further many cases are too remote from the apparatus to take this treatment. For some time various men have been writing as to the value of ether injections. W. F. Drake in the Ohio State Medical Journal of May 1924, reports very favorably upon its use during an epidemic. He writes that "The number of paroxysms was reduced by one half after the first injection." Cleon C. Mason in a preliminary report in the Archiv. of Ped. June, '24, p. 429, entitled "Treatment of Pertussis with intramuscular injections of Ether" gives his experience in 26 cases. The ages of the children ranged from 6 months to 2 years. Considerable care was taken to be sure that the patients really had whooping cough. The children were private patients, and their parents understood that the method of treatment was still in the experimental stage. The injections were made 'deep into the buttocks, commercial anaesthesia ether being used. The dosage ranged from 5.5 to 2 c. c. chiefly according to number in the series then being administered. Age apparently

played a lesser part. Most of the cases received 8 injections. Dr. Mason after mentioning some details of the ether treatment states that "60% of the patients stopped coughing and were apparently cured; 24% were definitely benefited, and 16% failed to respond or became definitely

worse." The author very properly concludes that if in a far larger series of cases equally good results can be obtained we shall have a remedial agent which while far from being certain, yet should be of decided benefit to many.

## ROENTGENOLOGY

*T. A. Pitts, M. D. Columbia, S. C.*

With the general acceptance of the fact that focal infection can cause general systemic symptoms and remote pathological changes, more attention is paid to teeth. Roentgenographic study is one of the most accurate methods of gaining information; however, the findings are not always in keeping with the symptoms. There are teeth showing marked changes at the roots where the patient is caring for the infection and having no symptoms and on the other hand there may be no changes demonstrable which later may prove to be the point of origin, of symptoms.

There is still no question in the minds of any that a known focus should be removed as it is an additional strain on the protective mechanism of the body and must be considered a constant source of danger and may become a serious question in the event of some other process that will cause the patient to become below par.

Since it has been shown that a dead

tooth may be the focus of infection and yet be negative to all forms of examination it would seem wise to consider removal of all non viable teeth in case of symptoms focal infection where a diligent search has been instituted elsewhere with negative results.

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## MINUTES

### REPORT OF THE COMMITTEE ON STUDY AND PREVENTION OF VENEREAL DISEASES

The essential features of an anti-venereal campaign have been brought out by this committee in reports of the past two years. Reiteration of such a program should still be of interest:

1. The suppression of prostitution.
2. Educational.
  - a. Religious and moral.
  - b. Education of the general public as to the harmful effects.
3. Medical measures, which include the following:
  - a. The physical examination of those who apply for marriage licenses.
  - b. The use of prophylactic measures by those who expose themselves.
  - c. The treatment of those already infected at clinics and by private physicians.

There has not developed any new procedure in the past year. The campaign, as a whole, throughout the country is very poorly organized. There is no concrete national program, which in our opinion, should exist; and while the various states are doing something, considerable more than what had been done up to a few years ago, their efforts are not very aggressive and altogether efficient. This is not a criticism of our state health department; on the other hand, we truly think that they have done and are still doing wonderful work, taking into consideration the poor financial and moral support which they receive from the state government and the public. The moral conscience of the public has not yet been aroused to the importance of the ravages of venereal diseases. The newspapers have not yet accepted their duty; they still fight shy of publishing facts and data worth while in regard to venereal diseases and on the other hand will put before the public in bold type news of the most licentious nature. We may recall, for example, that the most obscene scandals are published almost daily and the mere mention in an inconspicuous part of the paper of a lecture, or something else on venereal diseases, causes consternation.

We are glad to note, however, that inter-

est in anti-venereal work is being shown by many of the civic organizations, such as the Civic Leagues, Mothers' Clubs, etc. It has been our observation that women are more interested in the subject than heretofore and are very much more concerned than the men. We believe that they will take the lead and carry on in this work and in course of time demand of the man as clean a bill of health as he expects to receive from the women.

We have only a few matters of interest to bring up. We cannot too strongly urge again the establishment in every center throughout the state of venereal clinics for the diagnosis and treatment of those already infected. In the opinion of some health officers this is the most beneficial part of the campaign. Dark-field and other microscopic examinations are indispensable on the part of the profession in the treatment of venereal cases.

We feel that value of the Wassermann test is not yet clearly understood by many of the profession. It is yet imperfect and lacks much in the fulfilling of the desideratum; at least 10 to 20 per cent of syphilitics will give a negative Wassermann test. Careful history and physical examination of the patient is yet most essential. The laboratory here, similar to practically all in the practice of medicine, cannot be substituted for a thorough knowledge of the underlying principles in the diagnosis and treatment of disease. The Wassermann test is not often positive in the primary stage of syphilis; is almost 100 per cent positive in early secondaries; is frequently negative in tertiary and neurosyphilis. As a criterion of a cure of the disease it cannot be relied upon.

We believe that better cooperation can be obtained from the druggists than we are now getting. This has reference to their prescribing for venereal diseases, especially gonorrhea and venereal sores. We recommend that this association take steps to request the druggists not to try to treat venereal diseases, explaining to them that not only the patient but the public suffers by their doing so.

Respectfully submitted,

Milton Weinberg, M. D., Chairman.

W. H. Lyles, M. D.

N. Bruce Edgerton, M. D.

Mr. President, your committee on Public Policy and Legislation begs to make the following report:

We did not attempt to have any new legislation enacted, but rather exerted all our efforts in preventing the passage of the Chiropractor bill. The Chiropractors gained two votes in the Senate this year above the vote of 1923. We succeeded in having the editor of the "Columbia Record" write an editorial which was favorable to our side entitled "Let The Medical Law Alone." Copies of this editorial, which cover the subject in a remarkably satisfactory manner, were distributed among the Senators. Most of the credit for preventing the passage of this Chiropractor bill is due to Senator Crosson of Leesville, who is also a member of this committee. We have incorporated a copy of this editorial in our report, but will not read same now on account of the time required.

We recommend the following:

That the delegates here assembled from every county in our State be appointed and constitute committees in their respective counties and see that the in-coming Legislators, both members of the House, and members of the Senate, be thoroughly informed in the matter of Chiropractic practice from our point of view.

We further recommended that all the daily and county papers throughout our State be influenced by tactful education to print editorials similar to the one printed by the Columbia Record and referred to above.

We also feel that it is wise and proper for this body to memorialize the Governor of our State drawing his attention to the fact that the law is being flagrantly violated by the Chiropractors in our state who practice without being licensed by the State Board Medical Examiners. The only proof that it will be necessary for the Governor to have will be the advertisements in the daily papers, and also a signed article by Dr. Bauer, Head of the Chiropractor Association in this state, which was printed in the Columbia Record, Sunday, Feb. 17, 1924. Dr. Bauer says in this article signed by him as "President of the S. C. Chiropractors Association" that he will continue to practice and openly violate our State Law and will go to jail before he will stand a medical examination given by an Examining Board of regular physicians.

This article by Dr. Bauer is attached to our report.

Marion H. Wyman

Chairman, Committee on Public

Policy and Leg.

Report of the Committee on Health and Public instruction.

Mr. President and gentlemen of the South Carolina Medical Association:

The chairman of this committee and the one as usual that we expected to do all the work and to prepare this report was Dr. Paul Knott. For several years Dr. Knott has been the very efficient Health Officer of Newberry County but I am sorry to state that a few days ago he resigned his position there and returned to his former home in Maryland. So we are deprived of the information and suggestions that his training and experience would have made valuable in a report of this kind. Dr. R. G. Hamilton, the other member of this committee and also the efficient head of a country health unit, has given up his work in Fairfield County but I am glad to report that he has not left the state but has taken up work in a broader field, in the malaria control work.

Since it has fallen to me to prepare this report which should bring before the profession for consideration a few recommendations that might promote the general public health in this state or some teaching that might be passed on to the individual citizen that has for its aim the promotion of longevity, I shall mention as the first item for consideration the full time county health unit. Of course modesty would have prevented the other two member from giving this item the prominence or the emphasis that it deserves. The busy practitioner, however good his intentions or however great his love for fellowman, because of his absorption in the labor of alleviating pain cannot function with any degree of regularity as the instructor of the public along the lines of health. Also his tasks are largely taken up with the sick and the supposedly sick and we will have to depend for the present at least upon the the salaried health officer to instruct the masses on how to keep the well well.

In such simple measures as smallpox vaccination and typhoid inoculation there is yet in South Carolina a great need for missionary work. The prevention of smallpox by vaccination has been practiced for about two hundred years and yet it is surprising how difficult it is to get 100% vaccination in the city schols. In some of the rural schools there is practically 100% unvaccinated. The statistics from the bureau of vital statistics

show a greatly decreased mortality from typhoid but if it is to continue to decrease some one has got to go out into the byways and hedges and preach typhoid inoculation, fly-proof closets and better sanitary conditions. And so I contend that the county health unit is the only solution of these questions at the present time.

Urban and rural life, since the advent of automobile, are becoming more and more intimately related and whatever contagion is prevalent in one soon becomes prevalent in the other. So except in the counties where there are large cities the health officer should have in his charge the health matters of the whole county and where there is both a city and a county health officer there should be the closest co-operation between the two.

Then I think it is incumbent upon the profession to advocate and to labor and to plan toward the end that each county in South Carolina have a well manned and well equipped and actively functioning health department. And also that we who practice the curative side of the science aid in any way possible to make the path of those practicing the preventive side as smooth as possible for in some counties this path has not been strewn with flowers.

There are two measures that have been taken up by the State Board of Health recently that I think at the present are in a sense educational and so I deem it entirely in the scope of this report to call the attention of the profession to them although you will probably hear about them from other sources.

The first of these is the Dental Clinic which did such splendid piece of constructive work last year. Our sister profession of Dentistry deserves great credit for the splendid way in which they backed up this movement. The greatest accomplishment of this work is in the rural schools for here we often find the teeth woefully neglected but there is also a fertile field in the city schools. When we reflect upon the baneful effects of decayed teeth and the attendant ills of foci of infection about the roots or these we can well lend out influence toward the creation of a public sentiment in favor of this work and a sentiment that will insist that legislature appropriate the necessary funds for continuing and enlarging this work.

The other measure referred to and upon which the public needs some instruction is the recent appropriation for indigent cripple children. The amount for this year is very

small, not enough to take care of more than a hundred cases, although Dr. W. A. Boyd of Columbia has very generously offered to give his services gratis that the whole sum may be used for actual hospital expenses, appliances and if absolutely necessary transportation. This is just a beginning and it is hoped that these cases scattered over the state may demonstrate what can be done for these unfortunate little ones. We have all seen these little warped and twisted limbs straightened out by scientific measures and often a little fellow can be taken up off his all fours and made into a useful citizen. Again the appeal is through the profession for public sentiment which is so necessary to get sufficient means for the carrying forward of this work. South Carolina cannot depend upon North Carolina, Georgia, and the masonic lodge to care for her cripple children. She must assume the burden which should be looked upon rather as a privilege.

We would like to comment upon and to suggest some needful measures in the great health program as carried on by the malaria and tuberculosis work but acting upon the principle that in multiplicity of recommendations there is a dearth of accomplishments we will leave these to some other committee at the same realizing fully how vitally these affect the public health and upon which the people need so much instruction.

As the last measure to be taken up in this report we wish to bring before the profession the matter of health examinations. Our national association has already worked out this matter through committees and our state association could not take a more forward step than to adopt some measure looking toward the adoption of this phase of preventive medicine and to instruct the public upon the benefits to be derived therefrom. The slogan of "An examination on your birthday" if acted upon would mean the protection and the salvaging of many lives. The scientific basis of periodic examinations rest upon common knowledge and experience. As Dr. Rankin has well said "There is no sharp line of distinction between health and disease. One fades by almost imperceptible gradations into the other." The human machine requires continuous care and not merely spasmodic attention upon a breakdown. Osler had somewhat the same idea years ago when he said that the way to attain a ripe old age was to have some chronic disease which require that care and attention be maintained always.



There is an increasing demand for this kind of service upon such organizations as the Life Extension Institute and the Longevity Departments of life insurance companies. If life insurance companies can afford to pay for this kind of an examination of its policyholders in whom they are interested only to the extent that they live on and pay more premiums certainly the individual can afford it. For his interest in his own life is greater than that of the life insurance company regardless of the size of the policy upon it. When we realize that fully one third of the people—children and adult—have some physical or mental defect, many of which are remediable, the need of periodic examinations becomes a duty of the medical profession.

In order to get this important work inaugurated and working successfully there will be required a great deal of thought and preparation for we cannot expect the profession to change over night from thinking in terms of pathology to terms of health. But we believe this work is going to be done in the future and that the organized profession is the one to do it.

W. R. Wallace,  
For the Committee.

## REPORT OF COMMITTEE ON SCIENTIFIC WORK.

To the President and Members of the House of Delegates:  
Gentlemen:

In compliance with instructions given by you at the last annual meeting, your committee has arranged the program of scientific work to include two symposia in addition to the addresses and papers of guests and members. The first symposium is on diabetes mellitus and the second on obstetrics and gynecology. This program is in your possession and your committee trusts it will meet your approval.

Certain recommendations were made by your committee last year and the year before relative to its activities. These recommendations are understood by your committee to have been referred to the special committee on revision of the constitution. Your committee has no additional recommendations to make relative to its work.

Respectfully,

Wm. R. Phillips,  
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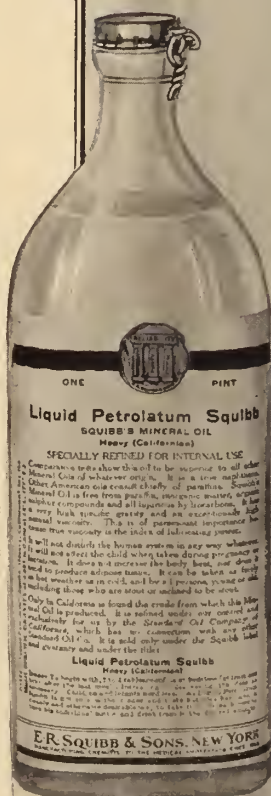
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# The Journal OF THE South Carolina Medical Association

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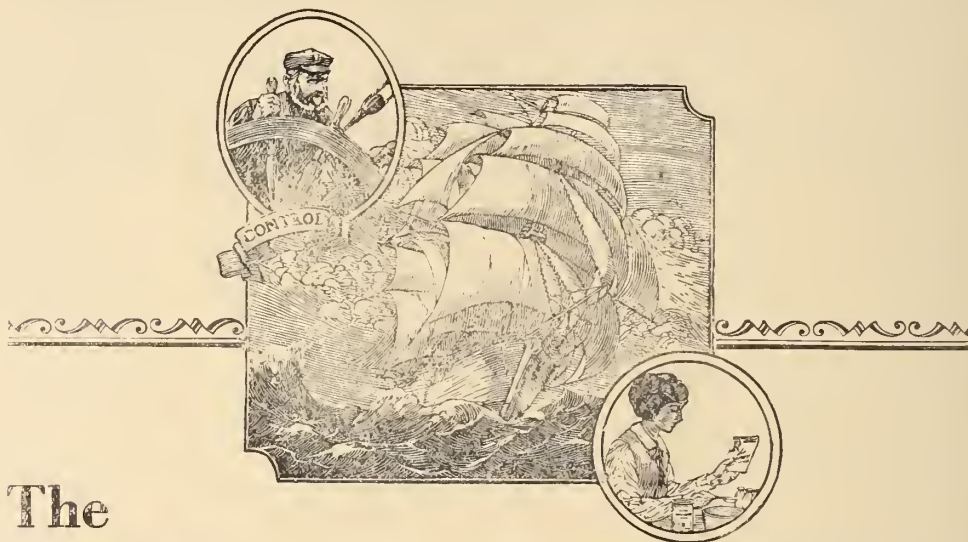
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## OF THE

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## EDITORIAL

### THE PERIODIC HEALTH EXAMINATION AGAIN

The editorial in the July Journal on the subject of the health examination received a gratifying response from members of the association. The suggestion that the subject be put on the program of the county medical society meetings we believe will be acted upon at once. Some of the state societies are now putting on the program a clinic at the state meetings to examine the doctors themselves and demonstrate thereby the value of such a procedure. It is eminently fitting that the physician should begin by having himself checked up at intervals. There is no more valuable citizen in any community than the physician, and he should guard his health by every means known to medical science. The JOURNAL

has blanks and reprints of direction as to how these examinations may be made. We shall appreciate further inquiries.

### PRESIDENT D. M. CROSSON A CANDIDATE FOR CON- GRESS

Dr. D. M. Crosson of Leesville, President of the South Carolina Medical Association, is a candidate for congress from the seventh district. Dr. Crosson has had nearly twenty years experience in the state legislature, and has fought valiantly for the best interest of the medical profession of South Carolina. It is conceded by the profession throughout the world that when opportunity offers to support a fellow member for political honors that this should be done in a whole hearted manner. It is well known that

medical men have been conspicuous for their absence in the congress of the United States while the reverse is true in France and Germany and elsewhere in Europe. Practically every organization now strives to not only elect their members to congress, but in many cases maintain whole time contact with the government by personal representatives at the national capitol. The medical profession will never secure the recognition it deserves unless more of its high classed members can be induced to offer for public office. Dr. Crosson's large and varied experience in the profession and out of it will give him a peculiar advantage as a congressman not only to the medical profession but in the interest of the people of South Carolina.

## DEATH OF DR. W. D. OUZTS

The passing of Dr. Ouzts of Johnson, Edgefield County, June, 19th. at the age of sixty-five removes from our midst a loyal member of the South Carolina Medical Association. Dr. Ouzts was a familiar figure at nearly all of our annual meetings. We are indebted to the Edgefield Chronicle for information as to the Doctor's death. Dr. Ouzts equipped himself for the practice of law in his early life, but abandoned the law for medicine. He also identified himself with the conduct and management of the *Edgefield Chronicle* in the early eighties, but it was as a country doctor and farmer that his success was most marked.

## ORIGINAL ARTICLES

### THE SIGNIFICANCE OF KIDNEY COLIC

By *Milton Weinberg, M. D., Sumter, S. C.*

Patients suffering with kidney pain are frequently seen by almost every physician. As a urologist, it is my intention to state some of my experiences in such cases in order to show the significance of kidney pain—the variety of lesions which may cause it and those lesions which one commonly meets; and establish certain facts, the knowledge of which is essential for the right conception of these cases.

The observations are based for the most part on approximately 1000 cystoscopies in my private practice; the cases represent exactly the same type which are seen in the routine practice of both practitioner and specialist.

The nerves to the kidney accompany the blood vessels. They arise from the renal

plexus which comes from the solar plexus and are distributed to the kidney capsule, tubules, glomeruli and pelvis. Pressure on a kidney produces practically no pain—but a sickening feeling; incision into the parenchyma does not cause pain. It is quite probable that kidney pain usually arises from the renal pelvis; irritation from any cause usually causes some discomfort; while distension may produce most intense agony. Manipulation of the kidney pedicle causes pain on account of the surrounding peritoneum.

The relation of the ureter in the production of pain has not been definitely determined. It is not unlikely that in ureteral obstruction the pain is due to distension of the renal pelvis.

The writer found that the common causes of renal pain are as follows: Pyelitis, stricture of the ureter, kink of the ureter due to abnormal mobility of the kidney, calculus, hydronephrosis and pyonephrosis; less common, tumor of the bladder when it is situated at the ureteral orifice, essential



hematuria when the ureter becomes obstructed from a blood clot, tuberculosis of the kidney, tumor of the kidney, pelvic tumors other than pregnancy, certain forms of nephritis, infarcts, prostatic enlargement, seminal vesiculitis, stricture of the urethra. There are types of cases of kidney pain in which no cause can be found. It is suggested that there may be a common cause of the pain, such as distension of the kidney pelvis, for the reason that so many conditions may produce the same pain.

It has been the experience of the writer that renal pain is most frequently caused by pyelitis; we quite often see severe kidney colic during a pyelitis of pregnancy. Next to pyelitis, I have found that kinking and stricture of the ureter in frequency; then renal or ureteral calculus.

In the management of a case of kidney colic we should bear in mind many facts which have been demonstrated by investigation of the writer. It is an outstanding fact that the character or intensity of kidney pain is no indication of the nature of the lesion causing it. For example, it would be an exceedingly bold guess to state that a person has a kidney or ureteral calculus on account of a very severe attack of renal colic as other renal conditions do frequently, cause the same symptoms and only careful examination by various urological methods will reveal the underlying cause. Again, the severity of the pain is no index to the extent of renal involvement. It is a common experience to find that many cases with slight lesion suffer more pain than others who have marked destruction of renal tissue. For example, a chronic pyonephrosis may exist with very little general discomfort; while the pain of a small calculus or slight stricture of the ureter may give untold agony, uncontrollable with morphia. On the other hand, an extensive lesion may cause very severe attacks. The following case bears this out: A. H. M., white married woman, aged 42, complained of very severe pain—typical attacks of kidney colic—off and on for several months. Slight fever was pre-

sent at times; frequently, it was normal. Examination showed a pyonephrosis of the left kidney; complete destruction of renal tissue, there remaining only a mere shell or sack. Another point, the same lesion may in one patient give rise to no or little discomfort, and in another produce the most intense agony. The subsidence of renal pain may occur with total freedom from attacks like those previously experienced; and if the underlying cause be not removed, there may be ultimately partial or total destruction of renal tissue. In surgery of the kidney, it has been observed that the patient has had kidney symptoms for about four and one-half years; and in the meantime, only ineffective drugs had been given.

One of the greatest mistakes that is frequently made by the profession is to rely on X-Ray findings alone for the existence of a suspected kidney lesion, especially in cases of colic. I will state without reservation that in almost every case it is a waste of time and money to have X-Ray pictures of the kidney made unless it is done in conjunction with cystoscopy and ureteral catheterization.

In cases of kidney colic, urinary examination—especially microscopic—is a great aid; there is, however, nothing in the urinary finding that is specifically due to any one type of kidney lesion. For example, kidney colic plus red blood cells in the urine may be caused from stricture or kink of the ureter as well as from calculus; or it may be due to papilloma of bladder as will be mentioned later in a case. The presence of pus cells in the urine does not tell us whether or not there is a coexisting stone along with the renal infection, or an infected hydronephrosis, stricture, etc. Negative findings in the urine do not exclude kidney involvement. This fact is shown in case 10 which is reported among the few cases mentioned in this paper. Also, the following case will bear out that point: J. A. D., white married woman, aged 22, complained of pain in left kidney region, extending along the course of ureter on same side. She had a fever and had had several chills. A

catheter specimen of urine showed only an occasionally pus cell. She was cystoscoped, and as the ureteral catheter entered ureter, a great deal of very turbid urine gushed from orifice; microscopically, very many pus cells were seen in this specimen and in the one from that kidney. What had happened was that the ureter was completely obstructed from the infected, purulent urine.

The following cases, briefly narrated, will serve to show the absolute necessity of investigating the underlying cause in any case of renal colic:

Case 1.—J. A. H., white man, aged 30, single, complained of severe pain in left loin, radiating across upper abdomen. First attack began ten days previously and required large doses of morphia for relief. Has been having almost constant pain since, which on several occasions required more morphia for relief. Examination: Patient is well nourished, very healthy looking man but appeared to be in some pain. Temperature normal; urine showed some pus cells and few red blood cells. In brief, cystoscopy showed a reddened, swollen, pouting left ureteral orifice. Introduction of ureteral catheter caused a great deal of very turbid urine to escape from left ureter and kidney; and 15 cc of residual urine were aspirated from left renal pelvis, this being retained from obstruction. This urine showed very many pus cells. There was no stone. The patient was immediately relieved of all his pain and finally subsequent examination showed that pyelitis had cleared up. Diagnosis: Pyelitis of left kidney causing renal colic.

Case 2.—P. J. G., white man, aged 42, married, had had almost constant renal pain of great severity for about ten days. He was given morphia in large doses so as to keep him under its influence. Had two other attacks many months ago. Examination showed a well nourished man who appeared to be suffering great deal of pain. Urine showed many pus cells and few red blood cells. Cystoscopy showed a much reddened and swollen right ureteral orifice

which bulged considerably. Further examination revealed a ureteral calculus near orifice. Passage of ureteral catheter caused great deal of very purulent urine to escape. There were many pus cells in specimen from right kidney. Patient obtained much relief from passage of this catheter and after several dilatations of ureter, a calculus was passed. Diagnosis: Ureteral calculus with pyelitis right kidney.

Case 3.—T. P. F., white man, aged 52, had paroxysm of kidney colic about two months ago; since then has dull aching pain, more or less constant, in left lumbar region and has noticed hematuria at times. Patient is a well nourished man. His urine shows an occasional pus cell and a few red blood cells. X-Ray and pyelography showed stone in left renal pelvis.

Case 4.—L. D. P., white woman, aged 23, complained of severe pain in left lumbar region, extending down course of ureter. She was seven months pregnant. Pain very severe. No rise of temperature. Has lost about 10 pounds in weight within past two weeks, since trouble began. Urine showed many pus cells. Catheterization of left ureter obtained 40 cc of urine which showed that drainage was not good; Some pus cells in specimen. The pain on that side was relieved and she began to have severe pain in other kidney. Catheterization of that kidney also showed about 30 cc residual urine with many pus cells. After this, she improved very much and about six weeks later gave birth to a normal child. Diagnosis: Infected hydronephrosis from pregnancy.

Case 5.—Mrs. R. V. R., white woman, aged 66, complained of pain in left kidney region, extending along course of ureter. Has had these pains off and on for about 30 years. Bladder symptoms at times. Cystoscopy showed what appeared to be a cystic tumor almost over left ureteral orifice. Fulguration of tumor has cleared up entirely the kidney pains. Diagnosis: Tumor of bladder, situated over ureteral orifice, producing kidney colic.

Case 6.—J. M. W., white man, aged 22, complained of severe pain beginning over left ureter, extending to left lumbar region and down thigh. Few pus cells and red blood cells. Cystoscopy showed papilloma situated over left ureteral orifice. The tumor had a fairly long pedicle. It could be seen acting like a ball-valve in the crevice of the orifice; Fulguration of tumor cured patient of kidney colic.

Case 7.—M. D., white woman, aged 38, complained of passing blood in urine and severe attacks of kidney colic. Examination showed this to be a case of essential hematuria which was relieved by distending the renal pelvis through the ureteral catheter. The attacks of colic were due to blood clots obstructing the ureter at times.

Case 8.—T. W. E., aged 60, white woman, was taken ill two weeks previous with severe attack of renal colic, and fever. Urine showed many pus cells. Ureteral catheterization with pyelography showed a stricture at uretero-pelvic juncture. Dilatation of stricture twice caused very marked improvement, which patient says that she has felt better than she had for several years. Diagnosis: Kidney colic due to stricture of ureter with secondary pyelitis.

Case 9.—A. J. M., white woman, aged 38, complained of kidney pain for about two years. Examination revealed large hydronephrosis, infected, with great loss of kidney substance and no function left to the kidney. Nephrectomy cured patient. Diagnosis: Infected hydronephrosis, due to aberrant blood vessel.

Case 10.—A. E., white girl, aged 20, complained of severe kidney pains. Examination of urine entirely negative. Pyelogram showed a ureter that was bent at practically right angle.

### SUMMARY

Kidney colic is usually due to obstruction of the ureter causing distension of the kidney pelvis; this obstruction may be produced by very many conditions such as have been mentioned in this paper.

Urological examination with the cysto-

scope, ureteral catheter, and pyelography is necessary in almost every case for a determination of the underlying cause.

Failure to remove the cause of the trouble jeopardizes the integrity of the kidney and therefore, the general health and life of the patient.

### NEO-NATAL CARE (NURSING HOURS, CLOTHING, DRUGS ETC.)

*By Wythe Rhett, M. D., Charleston, S. C.*

I feel strongly that the Neo-natal period is the most critical one in the health destiny of most infants. "Too often in the past the accoucheur has breathed a sigh of relief when he tied the cord and watched the baby borne away in a blanket, feeling that his work was done." The fact is that it has just begun,—the responsibility of another life was born with the baby. The future health of this infant depends in large measure upon the intelligence and skill of its attendance during the first few days and weeks after birth, and while this is the most critical period of life, it is frequently the one most lightly treated.

In his recent edition Abt states that "at the present time a substantial reduction in the general death rate rests largely in still further cutting down infant mortality, especially in the early weeks of life. The reduction in infant mortality thus far affected has taken place largely in the latter half of the first year. Very little if any progress has been made in limiting deaths in the Neo-natal period. Upward of forty per cent of the deaths during the first year of life occur in the first month."

In 1921 the mortality rate of infants under one year of age in the birth registration area of United States was 75.6 per one thousand live births. In this area there were reported 1,714,261 live births, a birth rate of 24.3 per 1000 of the population.

Read South Carolina Medical Association, Orangeburg, S. C., April 16, 1924 in Symposium on Obstetrics and Gynecology.



The mortality rate for the first 14 days of life was 33.6 per 1000 live births. The rates for the first year from the following causes were: Premature birth 17.9; Congenital malformation 6.1; Congenital debility 4.4; injuries at birth 4.2 and syphilis 0.9. The total death rate of these five causes was 33.5 per 1000 live births. Thus it will be seen that the result is the same whether we take all the deaths that occurred in the first two weeks as due to natal or prenatal causes or accept the designation of the reporting Physicians. Applying the birth rate of the registration area to the country as a whole, there was an estimated birth of 2,620,348 live babies in 1921. A mortality of 33.5 per 1000 live births means a loss of 87,781 babies annually,

Abt states that "On a conservative basis 40% of the Neo-natal deaths could have been prevented by proper prenatal and obstetrical care." Applying this to the annual loss above, it would show a saving of 35,112 babies each year. Hence the question arises at once as to how the necessary care may be obtained for the sake of reducing this neo-natal mortality. The treatment and cure of the comparatively small number of babies which come under the observation of any one physician in his private practice year by year can have but little influence on the infant mortality rate. The physician, whether Pediatricist or not, can not escape the responsibility which faces him in a community where infant mortality remains unduly high. This problem makes more than just a professional appeal, and it is only by organized child hygiene work that it is possible to reach the babies in the prenatal and neo-natal period, so as to forestall their sickness and institute treatment at a time when the best results can be obtained. The public must be educated through the profession and by lay journals in the advantages and importance of prenatal care in early as well as late pregnancy, and agencies must be provided for such care for the poor and uneducated as well as those willing and able to pay for it.

This will make it possible to secure the assistance of competent trained public health nurses in carrying out the details of this care and in reaching that large group of mothers and babies who need it most, and who can be reached in no other way.

The Obstetrician has the burden of the prenatal and natal mortality and the problem of bringing the baby into the world in the best possible condition. The Pediatricist must make the best of the human material at hand. There is no question that the character of the feeding during the first year of life is the main factor in the present and future health of the baby. Although prenatal and natal conditions may largely account for neo-natal deaths, we must look to difficulties in feeding as the underlying cause of the disorders which result in so many deaths during the later months. Hence the most important single factor in the successful care of the newborn is maternal nursing, and it should be an unwritten law that no child be deprived of its natural food except under most unusual circumstances.

As a result of labor both the mother and the child have undergone a strenuous ordeal and have been subjected to severe physical exertions for many hours and naturally need sleep and rest. After being cleansed, dressed warmly and placed in their cribs most new-born babies will sleep quietly for nearly twenty-four hours. When they awaken during this time, usually a change of diaper is all that is required, but they may be given boiled water. All pediatricians are not in accord on the question as to when the baby should first be put to breast, but the most common custom is to allow nursing once toward the end of the first twenty-four hours and then to go directly on with the permanent feeding schedule.

There is a lack of accord also on the question of nursing hours for the new-born, some advising the two or three hour interval during the first few weeks, others with apparent success employing the four hour schedule from the establishment

of lactation. My own experience leads me to favor the three hour interval for the routine procedure reserving the longer interval of four hours for those mothers with an abundance of rich milk, where the babies are over-fed on the three hour schedule with resulting colic, and often frequent loose sour stools. My experience with the four hour interval during this early period has been that it tends to diminish secretion in a large number of mothers, with an early failure of lactation. The two hour interval is trying on most mothers and tends definitely to over-feeding in the baby.

The feeding of the first few days is more important than that of any other time in the establishment of regular habits of feeding and sleeping. There is seldom difficulty in getting a full-term, well infant to nurse. If the infant is normal, and this fact should be carefully ascertained, he should be put to the breast regularly and every attempt made to assist him. A normal infant will soon become hungry enough to nurse. Where they do not one must be doubly sure that there is no physical reason why the child is slow to nurse—such as deformities of lips or mouth, nasal obstruction, retracted or small nipples, too large or cracked nipples, etc. More common and more frequently overlooked causes are prematurity and cerebral hemorrhage.

In the neo-natal period the question often arises as to when to give complemental feedings. In the average baby nature has provided for a period of several days with sufficient reserve food to take care of their wants. It is possible to avoid weight loss to some degree by feeding new-born babies immediately after birth, but this weight loss is at least in part due to other influences than lack of food. In the decision as to when to give other foods one must be guided by a study of the child's weight curve and the mothers milk supply. As a rule the new-born loses in weight for three to four days and then begins to gain if the mothers milk is adequate. If by the fourth day the mothers milk is scanty, and the baby

is still losing weight, the addition of complemental feeding must be considered. If additional food is given too early the child will learn to prefer the bottle feedings and nurse poorly. This removes the necessary stimulation from the breast and weaning soon results. The plan of giving additional food was tried in the breast feeding campaign conducted at the University of Minnesota and it was found that too early complemental feedings resulted frequently in a definite reduction of the milk supply.

Where the breasts are not furnishing sufficient milk by the fifth or sixth day it is necessary to give some other food, but breast feeding must not be discontinued,—rather the indications are for increased activity in the attempt at breast feeding. After each nursing a sufficient quantity of complemental food is given to furnish the babies food requirements. In institutions it may be possible to supply this complement by breast milk expressed from some mother with an abundant supply. If this is not possible a simple milk mixture is the best, consisting of 1-3 whole cows milk, 2-3 boiled water and milk sugar up to 5% of the whole. As the breast milk increases, and it usually will, the complement is reduced or discontinued altogether. The milk mixture must not be too sweet, or too easy to obtain from the bottle, for the infant will soon learn to neglect the difficult breast and wait for the easily obtained and sweeter bottle feeding.

In regard to the technic of nursing the time allotted will allow of very little discussion, but in view of its importance in the success or failure of breast feeding more attention should be paid to the care of the mothers nipples. This care should be begun during the latter stages of pregnancy, flat or depressed nipples can frequently be drawn out so that the child can grasp them. The skin may be toughened by cold sponging, applying 50-75% alcohol several times daily, or by solutions of tannic acid. When nursing is begun the nipples should be cleansed with sterile water

or boric acid solution before and after nursing,—this tends to prevent infection of tissues which may be starting as well as preventing the child from swallowing any infectious material with his food. If the nipples are cracked the best procedure is to have the milk expressed from the breasts for a few days and fed to the baby in a bottle. This does not injure the nipples nor impair the supply and at the same time gives the lesions an opportunity to heal. This healing may be hastened by touching up the cracks with a solution of silver nitrate.

Care should be taken especially during the early weeks of lactation to avoid overfilling and congestion of the breasts. If there is milk still left in the breast after the baby is through nursing the excess should be expressed, thus avoiding stasis with its danger of reduction of secretion. Corsets or other clothing which press upon the breasts and interfere with its circulation should not be worn.

The duration of each nursing depends upon the character of the breast and vigor and appetite of the child. Breasts which yield their milk rapidly will be emptied much quicker than those which yield with difficulty. However it is fairly well established that there is little use in keeping a child at one breast longer than twenty minutes. Weighing at frequent intervals during the nursing has repeatedly shown that most of the milk is obtained within 5-10 minutes.

There are certain general rules governing the treatment of new-born babies which I will merely mention in passing. Immediate warmth is essential and warm blankets and hot water bottles should be placed about the baby. The temperature should be taken at frequent intervals during the first few days to insure proper level (98 to 100° F. (Rectal) ). The eyes should be cleansed immediately after birth and a 20% Argyrol, or its equivalent organic silver preparation, or 2% silver nitrate solution instilled into each eye. These preparations must be

freshly made,—(Argyrol deteriorates in aqueous solution in 1-2 weeks time and should not be used after the latter interval.)

The cord should be wrapped in sterile gauze and a band applied which fits the abdomen snugly, giving support to the abdominal wall. The object of the band is not warmth but support to prevent umbilical hernia, and the frequency of this condition indicates the failure of the proper appreciation of this fact, and in consequence the improper application of the band. It is found up over the chest most often. This tendency of the band to slip upward may be overcome by pinning it down to the diaper on each side.

One function most frequently overlooked by the physician in the care of the newly born, is in regard to the genital organs. The female genital organs require very little attention beyond cleanliness, but practically all male babies do need attention, in that the prepuce is usually adherent and cannot be retracted by the mother or nurse to cleanse and remove secretions unless the adhesions are broken up and the initial retraction performed by the physician. If a phimosis exists to the extent of preventing retraction, the parents should be advised that a circumcision is necessary, and in a normal baby this should be performed about the end of the first week. This may be done with little difficulty, without a general anesthetic.

It is not uncommon to find an infant on the second or third day with a rectal temperature of 101-3° F., occasionally going higher on the fourth day. On investigation it is usually found that the baby is getting nothing from the breast at nursing,—the breasts may be engorged but milk is expressed with difficulty. Holt named this condition inanition fever. Various other causes have been thought to be responsible, such as lack of fluid, transitory sepsis, intestinal auto-intoxication, etc. Theobald Smith's recent researches in animal husbandry proved the bacteriolytic action of



colostrum (containing agglutinins which are directly absorbed into the blood of the new-born baby, thereby conferring upon it an acquired immunity), and would tend to show that when the child has not nursed a sufficient amount bacterial colonization may occur in the lower bowel to an excessive degree. These studies emphasize again the value of nursing during the first week even if the milk supply itself is not stimulated.

Inanition fever is the most common type of fever occurring in the new-born child. Treatment consists in emptying the mothers breast by expression; giving measured quantities of boiled water by mouth every three hours together with the colostrum expressed from the breasts; and putting the baby to the breast every three hours. The temperature usually drops to normal within twelve hours after this treatment is begun. Any febrile condition in the first few days of life which persists after sufficient fluid and food have been administered should be given at least a guarded prognosis.

The clothing of infants should be warm, light, and non-irritating to the skin. It should be loose enough to allow free motion of the extremities and should not interfere with movement of the chest and abdomen. The tendency is to over-clothe most babies,—this applies particularly to our climate at this time of year. Over-loading with clothes and covering is a common cause of restlessness at night, seen so frequently in early childhood. A baby cannot be dressed by rule of thumb methods and kept comfortable. His clothes must be made to suit the weather prevailing at the time. In winter they must be warm, in spring and fall the clothing must be lighter. In summer, in our climate, even new-born babies are more comfortable with very little clothes at all, and the less used the better for the baby.

Drugs occupy a very minor position in the treatment of new-born infants and a drug should never be prescribed for one unless its use is clearly indicated. When used it is preferable to give them singly, or in

simple combination, and it is usually best in simple aqueous solution when possible. The drastic cathartics should not be given. Foote states that the giving of calomel to the neo-nate is mal-practice in his opinion. The cause of the symptoms for which the drastic cathartics are usually given is in the food, and hence drastic medicinal treatment is futile,—they simply add insult to the injury of an already over-taxed digestive tract.

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#### Discussion.

DR. R. M. POLLITZER (Charleston): This interesting and instructive paper of Doctor Rhett has fully covered the subject and there is little to add unless I disagree or wish to expand some of the topics. I happen to agree.

If, as is said, 40 per cent of our deaths in the new-born are preventable—and it does seem that they ought to be preventable—that one of the major causes of death in the first fourteen days is that the baby is premature, then we should try to find out why they are premature, and the pediatrician backed up by the obstetrician would then be able to handle them. A lot of babies are killed by taking them off the breast at an early age, forgetting that probably the milk is slow in running in. Women differ remarkably in this regard. We should be patient, and we can help out by supplementary feeding. Also the time of nursing varies, but I believe three hours is best. As to the technique of nursing,—one would think women would know how to nurse their babies, but they do not. It has been shown that the technique of nursing and the time varies in different parts of the country. Constipation worries the doctor, but I think vomiting is much more serious, and congenital pyloric stenosis is sometimes present.

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DR. N. BRUCE EDGERTON (Columbia): I feel sure there is not enough attention paid to the examination of urine of women who are pregnant—both during pregnancy and immediately after. I believe a considerable number of the fevers that occur in women after labor are due to infection of the urinary tract and that oftentimes they go un-noted until the woman has had some damage to her kidney tissue. Bugbee, in a series of experiments at the New York Lying-in

Hospital, has very definitely shown that the kidney pelves contain more urine, probably about twice as much, as they do normally; that the kidneys do not drain as freely during pregnancy as when a woman is not pregnant, and for that reason the urinary tract is certainly susceptible to infection. I would like to stress very much the importance of carefully keeping up with the urine of pregnant women for fear they will have a pyelitis during parturition. Absorption takes place more quickly then and seems to have a more toxic effect on the individual than when she is not pregnant.

In the treatment of this condition I should like to stress the importance of the indwelling catheter to free both kidneys of this infection. I have recently had a series of three cases in which women recently delivered were having repeated chills, one of them in particular three or four chills a day, with a temperature which was going as high as 105 degrees. The placing of a No. 10 catheter in each kidney pelvis caused the temperature to drop within a period of three hours and it has not raised above normal. It is remarkable how these cases recover unless they have been going on for some time and the infection has invaded the cortical substance of the kidney.

Doctor Rhett mentioned the fact that in boy babies, where the foreskin is adherent it should be circumcised. I do not know that I agree with him in that. I believe the simpler procedure is slitting the foreskin sufficiently to allow it to retract from the glans penis. That is all that is necessary in these cases.

I want to commend the State Board of Health for the work it has done among the midwives. Doctor Hayne has organized some of the counties and the nurses who are doing this work in conjunction with the local doctors seem to be doing a good work. I believe the mortality brought out here today is due to colored midwives a great deal more than to the physicians. The physicians are not called until the women are dying.

DR. W. T. LANDER (Williamston): I do not believe we are such a low-down lot as all that. There are a whole lot of things that have to do with this mortality, but I do not believe the doctors have much to do with that. Most of the cases I have been called in to see I had no chance at them. That is

generally the case—they wait until the emergency and then send for the doctor. I do not think it is fair for the people who study statistics to bring this condition against us. It is the situation and not the man, I am sure. We are a part of the situation, of course, but some of the people need education as much as the doctors. The doctors I believe have a pretty fair education. The women in Anderson County need education. They say they do not want all this tomfoolery and they will not submit to it—or not many will. I do not believe anyone is more careful about obstetrics than I am, but I do not get much of that work to do, and it is because I am too careful. They want to wait until the last minute. They need education. Perhaps our wives in their societies can do something to get after the women in this matter. When a man wants to engage me I tell him I will not take the case unless his wife will permit me to make urinary examinations. I propose to take my share of the blame in these cases, but I cannot do what Doctor Rhett proposes because my people will not let me.

DR. WYTHE RHETT (closing): I think Dr. Edgerton misunderstood my reference to circumcision. I did not advocate it unless retraction could not be made primarily. The slight operation is not operative interference—retraction enough so the secretion can be removed and the parts cleansed. I wanted to stress the lack of attention to the genital organs and the importance of proper cleanliness in the care of the baby. If it cannot be retracted by that slight operation then circumcision should be performed to allow cleanliness, and cleanliness will lessen the number of boy babies who masturbate. It is lack of cleanliness which calls attention to these parts.

Doctor Lander brought out the important point of education. I tried to state that education should be carried on through welfare organizations that have agents to reach the ignorant and those who are uneducated and who will not take advantage of the opportunities which the physician will give them in his office if they will come for it. A great many will not come and have to be reached through some organization which can go to their homes and bring to their attention that they can have better treatment, less eclampsia and better babies if this treatment is followed.

## PYELITIS

*W. H. Powe, M. D., Greenville, S. C.*

As soon as we begin a study of the literature on the subject—pyelitis—we are immediately confronted with the fact that the term is a poor one. As ordinarily conceiving the pyelitis has to reach the pelvis of the kidney, but clinically it is used to designate a number of conditions characterized by the presence of pus in the urine. A true pyelitis is a rare condition. The infection causing the pyelitis has to reach the pelvis of the kidney in one of three ways viz. (1) through the blood stream, (2) through the lymphatics or, (3) through the lumen of the ureter. If hematogenous, the infection necessarily first causes some reaction in the parenchyma of the kidney and the pyelitis is apt to be secondary to a more or less widespread infection of the kidney substance proper. No doubt a great many of the chronic cases of pyelitis are those in which there is abscess formation and later drainage through the pelvis of the kidney. If the infection is borne to the kidney pelvis through the lymphatic circulation it may come directly from the intestine or ascend from some septic process in the lower genito-urinary tract. Of course if the infection is by way of the ureter it is necessarily secondary to a cystitis or other pathological condition lower down. This may be a ureteral stone or stricture causing a regurgitation of kidney secretion into the kidney pelvis. So in speaking of a pyelitis it is well to remember that we do not mean an infection strictly limited to the pelvis of the kidney, but we mean a more or less widespread inflammatory process, part of which is evidence by the presence of pus in the urine. Under this head we may be dealing with an uncomplicated pyelitis, but more probably we are treating also an abscess of the kidney, a pyelonephritis, a cystitis, a

ureteritis, a urethritis, a prostatitis, or an urinary calculus.

For a long time it was commonly accepted that *B. Coli* is the most common cause of pyelitis. Recent experiments at the Mayo clinic and elsewhere have attempted to show that such is not the case. It was shown that certain streptococci showed a predilection for the kidney when injected into a vein and these men concluded that the colon bacillus as a rule only played the part of the secondary infection. This is all very interesting but to me unconvincing. I still think that the colon bacillus probably is the most common exciting organism in this disease, although it is often complicated by the presence of other bacteria and no doubt sometimes is a secondary infection. This is especially true in cases in which the primary disease is tuberculosis. Besides the colon bacillus we find a number of other organisms causing occasional cases of pyelitis as would be expected when we remember that in all septic processes enormous numbers of bacteria are eliminated by way of the urine.

The symptoms of pyelitis are various. Usually there is the usual picture of an acute infection—chills, fever, general malaise, and leukocytosis. These are apt to be followed by lumbar pain which may be bilateral or unilateral and it may or more probably may not radiate along the ureters. Bladder irritation is apt to be present. Frequently unless we have been on our guard this will give us the first intimation we have had of the fact that we are dealing with a urinary infection. Often there are no definite symptoms pointing to this region. Often we have to depend entirely on finding pus in the urine to make a diagnosis, and even this may not be constant. It is not good policy to regard one negative urinary examination as conclusive proof of the absence of pyelitis. Pyelitis is extremely common in infants and young children, especially in girls, and whenever we have a fever that we cannot account for on some known pathological basis it is imperative



that pyelitis be ruled out for it is much easier to eradicate the disease if proper treatment is instigated early. No doubt vast numbers of chronic and even fatal nephritides are the direct result of overlooked urinary infections. It is not sufficient for us to say 'intestinal upset' when a child has a high fever that we cannot easily account for.

The most difficult early differentiations are those between pyelitis and otitis media, early pneumonia, and sinusitis. Often it is not possible to make the diagnosis at all between them until time has elapsed or pus has been found in the urine, and even then we cannot know at first but that the two diseases are concomitant. We know that stone in the pelvis of the kidney is often present in pyelitis and we commonly say that it is due to the presence of the stone, but the stone may also be secondary to the pyelitis, and when it is removed we should follow up that case and see to it that there is not a recurrence of it on account of a persistent pyelitis. In my experience digestive disturbances have been most common in children whom I later found to have pyelitis. In young infants this is often the only outstanding symptom, and in very young children there will often be no local symptoms at all. This is fortunate for many a healthy appendix is thereby allowed to live out a normal life whereas it would otherwise be subject to instant amputation. In adults there is more local pain and as a result a great many cases operated on as appendicitis later resolve themselves into inflammation or stone in the pelvis of the kidney. The only safe rule in these cases is to do a routine urinalysis before making a diagnosis. The same is true of cases of perinephritic abscess. Tuberculosis of the kidney will not be present unless there are tubercular foci elsewhere in the body.

The prognosis of this condition is as varied as is the pathology. Usually the nephritic process clears up before the accompanying cystitis, and the disease is prone to recur after apparent recovery. Pus

may be found in the urine long after the clinical symptoms have disappeared. In this case the treatment should be kept up in order that the renal pelvis be not reinfected. In cases seen early and in which there is no serious involvement of the parenchyma of the kidney, and in which there is no obstruction to drainage the course of the disease is from a week to two weeks. Of course if the case is one of a fulminating character in which there is a more or less complete involvement of the whole kidney and severe toxemia the prognosis is grave. The prognosis here is influenced by the promptness with which surgical relief is obtained, a nephrectomy offering the only chance for recovery.

The treatment varies according to the pathology present. As stated above violent cases with destruction of kidney substance and severe septicemia demand nephrectomy. Chronic cases often clear up with even one pelvic catheterization. The trouble being that there was not sufficient drainage from the diseased pelvis. If this does not give relief a decapsulation or drainage should be considered. Fortunately most of the cases respond readily to medical treatment. Rest in bed, full, low protein diet, abundant water, and sufficient Potass. cit. to keep the urine alkaline will cause a favorable response in the vast majority of cases. Orange juice is of assistance under this line of treatment and it also prevents the development of acidosis. If this course does not relieve the pyuria in a reasonable time resort may be had to other methods. Hexamethylenamin is said to be useful if the urine is first rendered acid by the use of acid sodium phosphate. This would be useful in relieving an associated cystitis but the writer does not think it would benefit a pyelitis, for formaldehyde is not released in the pelvis of the kidney. In any event Hexamethylenamin should not be kept up many days on account of the irritating effect of the drug. As stated above, ureteral catheterization is often a valuable procedure in persistent cases. Various drugs are used as

injections into the kidney pelvis. Mercurochrome, silver salts, and cultures of Bulgarian bacilli are among the ones giving favorable results.

Some European clinicians have had marked success with the intravenous use of neosalvarsan, a large percentage clearing up at once. No line of treatment will be successful in adults unless the primary focus of infection is eradicated. This is often found to be in the tonsils or in root abscesses. When these cases are apparently well they should still be followed up several weeks and several examinations made for pus or bacteria will often appear in the urine again, showing that the disease is not dead but sleeping.

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## THE JUVENILE BOARD OF HEALTH

And its Relations to The County Health Department.

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*By R. G. Beachly, M. D., Health Officer  
Dillon County.*

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A big part of any health program is the formation of personal health habits, and with the desire to impress upon the children in the schools of Dillon County the importance of them and the value of preventive medicine, the Juvenile Board of Health was organized. During my several years as a County Health Officer, I have become more and more convinced of the need for teaching some form of preventive medicine in the elementary grades of the public schools. While the Juvenile Board of Health does not meet all the needs and while it may be later improved upon, at the present time the success of it cannot be questioned and the good it has has done is evident.

In the Schools of Dillon County the Juvenile Board of Health is a real live organization and is the heart and core of our Health Program.

I will outline as briefly as possible the workings of the Juvenile Board of Health in connection with our County Health Unit. First of all, I will say our Unit consists of Health Officer, Nurse, Sanitary Inspector, (a most capable man who by profession is a minister but who has seen the vision so necessary to the successful Public Health Worker and so has taken this position to help spread the gospel of Public Health during the week days,) two dentists, one for the white children and the other for the colored.

The work of establishing the Juvenile Organization has been relegated to the Inspector or Nurse, who arranges with the Principal to speak to the entire school at chapel or morning assembly. The plans are discussed and the rules and regulations laid before them; their responsibilities are pointed out and their opportunities made much of. Majority of the country children are very ignorant of the means for improving their health but when the subject matter is presented to them in so interesting a form, they fall right in line. A very attractive little leaflet containing the rules and regulations, the duties of the Board, the eight rules of health, the health pledge, the daily health inspection and sanitary inspection score, is passed around for them to read and study. The Child's desire to 'belong' is aroused and the fact that this little leaflet is there before them with all the rules and duties laid out, appeals to everyone of them and they all are interested and consider very conscientiously the one they want to represent their class.

To make the work more clearly understood, I will sketch briefly the rules and regulations as put forth in the leaflet. Board of Health to be made up of a Health Officer and one representative from each room in the school. the Health Officer to be a student in good standing from the highest grade: each grade to elect one student who shall be a member of the Board; The Board to elect one teacher to act as advisor; the members of the Board to hold their of-

fice one year and to meet once a week.

The duties as suggested are as follows; to impress on their fellow students the importance of Health and good Health Habits, to correct and better conditions in the home and in the school, such as ventilation, temperature, lighting, sanitation of grounds and outbuildings, to assist with the right kind of games on the school grounds, to hold daily health inspection, to read and study health literature, and whenever possible, to introduce Health subjects in their studies and play, to bring to the attention of the Health Unit any condition in the neighborhood that might be questioned, such as faulty sewage, violation of the quarantine regulations, etc.

The Health Officer is nominated from the highest grade and the entire school given a chance to vote. The pupils are then requested to return to their respective rooms and there elect their representative, after which the Board of Health meets for the first time. They then vote for the teacher to act as advisor, and as soon as that person is present, the Member of the Health Unit once more tells them of their vast opportunity to be of assistance in reducing sickness and even death in their community. For the success of the work in the school, these children are asked to keep the eight rules of health and to encourage their fellow students to do the same. The children respond and assume their responsibility readily, and the little Health Boards begin to function at once.

The weekly meeting is something for them to look forward to and their various duties are planned and discussed. When ever possible a member of the Health Unit meets with them and assists in formulating something constructive; it may only be a tooth brush drill or the installation of sanitary toilets but it is one step forward in the Health Work of the county.

Returning to a school after the Juvenile Board of Health has been functioning for two months and asking the same questions regarding milk drinking, water drinking,

eating between meals, sleeping with windows open, cleaning the teeth, cleanliness both internal and external, and one cannot fail to notice the increase of the little hands in the air. It is encouraging to say the least, and if such a noticeable improvement is so evident in two months, what will it not be in a year, with these boys and girls, these Juvenile Health Officers who are reading and studying and enjoying "The Road to Health."

*The Dental Clinics.* The neglect of the teeth is one of the most frequent conditions that the Public Health Worker is confronted with.

In one two room school, it was found upon questioning the pupils, that not one had ever owned a tooth brush. In the course of the medical inspection, it was found that five children had as many as ten decayed teeth and that only three were free from dental defects.

Realizing the need for dental correction and classes in oral hygiene, two Dentists were employed to work in the public schools, one for the white schools and one for the colored. The Juvenile Board of Health paves the way, as it were, for the Dentist, by encouraging the children to have the dental corrections made. Previous to the arrival of the Dentist, a member of the Health Unit talks to the children on the care of the teeth and the importance of having the necessary corrections made.

The Dentists are supplied with a portable equipment which is set up in each school and all ready for work. The Nurse assists with the examinations and fills out the slips for the children. The number of defective teeth are recorded and the cost of the operations listed, a copy is sent home by the child with the request to return the slip and the amount of money next day. The charges are just about one third the usual rate. One of the teachers act as the treasurer and thus avoids the handling of the money by the Health Unit.

When the actual dental work is completed a class in oral hygiene is held in every



room at which time lectures from charts are given on the development and the care of the teeth. To emphasize this point the Dentist often tells the children to brush your teeth before you take your shoes off, then if you find yourself in bed with your shoes on, you will know you have neglected to do it. He also tells of the woman who asked him when to clean her teeth and instead of answering her question, he asked her how often she washed her dishes, and when she replied, "after I use them," he told her that was the answer to her question. These little things make an impression on the children. Tooth brush drills have been organized and have proven very beneficial. The nurse supplies twelve pupils who promise faithfully to brush their teeth morning and evening and after instructing them in the correct method of brushing their teeth, a demonstration is given in each room.

*Health Motion Pictures in the Schools.* Motion pictures are a big factor in the world today and how can Health be taught in a more interesting way. Of course it would be out of the question for a county health unit to have a motion picture outfit at the present time, as it would be too expensive to change the films more than once a year, but for a State Health Department it is excellent. Into every nook and corner of the state can these interesting and educational films be shown; folks never interested before can be reached simply because it is presented in such a fascinating manner.

Here again the Juvenile Board of Health has been of vast value to the Health Department. They make the arrangements and advertise the big advent and as the pictures are always shown in the schools one can always count on a large crowd, not only children but adults too. Once a year and with new films the moving pictures are welcomed to the county.

*Administration of Vaccines.* Probably no more important work is done by the Juvenile Board of Health than that of assisting the Health Officer in the administration of the various vaccines as advocated

by the State Board of Health. It is true that it pays to advertise, and as a school child enthusiast is the biggest advertisement a Health Officer could wish, these little co-workers often convert an entire family and bring them out to receive the preventive treatments.

The small-pox vaccinations are carried on during the first month of school and through the help of the Juvenile Board of Health many unvaccinated are brought to the attention of the members of the Health Unit.

The drive for the reduction of Typhoid Fever is one of the most important activities of the Health Department. At the onset of the Typhoid season, the school children are supplied with literature on the cause and prevention of typhoid and in this way the propaganda is carried into every home. The free administration of the vaccine at different points in the county is carried on throughout the typhoid season. By impressing the school children with the necessity of taking the vaccine and carrying the message to their families, a great work has been accomplished in the reduction of the typhoid morbidity.

Every home having a case of typhoid is visited by the Sanitary Inspector and improved sanitary conditions are suggested and an effort made to find the source of the infection and if possible, a carrier. The family is supplied with an antiseptic solution for use in and about any open privies and instructions given regarding the spread of the disease.

The Schick test and the Diphtheria preventive treatment is carried on in the schools in the fall and winter. Those found susceptible are given the Toxin Anti-toxin when requested to do so by the child's parents.

*Medical Inspection of School Children.* The physical examination of school children is carried on in the public schools by the health officer and nurse during the school year. Many defects are brought out in this examination and brought to the parent's at-

tention that otherwise would pass unnoticed. A record of the examinations of each child is made out on individual cards and filed in the offices of the Health Department. Parents are notified of the defects by the County Nurse and are encouraged to have the necessary corrections made.

During the course of the school inspection a list of all children with badly infected tonsils and adenoids is kept in the offices of the Health Department. In the spring a second notification is sent to the parents of these children with a circular letter telling of the Tonsil & Adenoid Clinic which is planned for their benefit and with a thought to saving them money for the operation. Working with surgeons of good repute a small hospital is set up in the county seat with well trained assistants and nurses; any child under the age of fifteen with defective tonsils may have them removed for the nominal fee of \$15.00. This is a valuable service as it brings the operation within the means of every parent, especially is this a boon to the people living in a community without a surgeon or hospital within a radius of sixty miles.

It has been a real pleasure for the members of the Health Department to see the improvement the children have made, both in their studies and physical development. It is not because parents are negligent but, because they 'Do Not Know.' Time and time again it has been brought so forcibly to my attention. We will take this one instance; the mother brought her little daughter to me, worried because she was pale and steadily losing weight. The child drank a quart of milk daily, ate nourishing food, fruit and vegetables, slept with the windows open at least eleven hours every night, in fact, the mother was doing all that any intelligent mother does, but she overlooked one little point. The child had two very bad teeth, pus was slowly oozing from one. Because they were 'baby teeth' the mother did not worry about them, but now, four months later, she knows that even the baby teeth must be considered for her little

daughter has gained six pounds and is much improved.

Several days ago a mother brought her eight year old son to see me and to express her appreciation for the advice given last fall concerning the boy's condition. The child was then a typical mouth breather and had infected tonsils. He was under weight but as he had never been troubled with sore throat she had no idea his tonsils were bad but since the operation the mother has watched with loving eyes the steady gain of her boy.

Cases such as these are more easily and more successfully managed than the orthopedic cases which have come under my inspection. There are a few children suffering from paralysis following infantile paralysis that could be corrected, but it is sometimes difficult to get the parent's consent to send the children to the hospital for any length of time.

A feeble minded child in a school is not unusual and so it is with the utmost tact that these parents are approached with the suggestion to send them to the State Institution. These children are never anything but a burden, no matter how loving a mother may be and even though they dislike admitting it; and while it is an advantage to the child to be put in a school, it is in many cases a blessing to the entire household.

*Sanitary Scoring of Schools.* The County Sanitary Inspector has instituted a system of scoring the schools in the county and has stimulated the interest everywhere in keeping the school buildings and grounds in a sanitary condition. The Juvenile Board of Health has again proven a factor in assisting and it is due chiefly to their activities that the scores of the various schools show such a high average. In scoring the schools the condition of the grounds, rooms, halls, toilets, water supply, is taken into consideration and a general average given, monthly. At the end of the year the school having the highest general average will be given a pennant.

*Health Playlets in the Schools.* Co-operating with the Bureau of Child Hygiene of the State Board of Health, the county has benefited greatly by the Health Playlets given by professional actors. Not only does this interest the school children but grown folk as well. It is presented in such a fascinating and interesting method that one cannot fail but feel impressed.

*Classes in Home Hygiene and Care of the Sick.* Another phase of county health work that falls to the lot of the Public Health Nurse are these classes for High School Girls. The primary object being to furnish elementary knowledge of the principles of personal hygiene and household sanitation, to teach initiative and to instruct in elementary procedure in order that physician's orders may be carried out more intelligently in the home.

*Milk Distribution in the Schools.* The local women's club has been of wonderful

assistance in furthering the work of the Health Department. Always on the alert for the betterment of their children's health, they have this past year furnished the school children with a pint of milk at the morning's recess. A pint bottle and a straw are passed to each pupil and this in itself has done much to improve the general nutrition of the group.

The ways and means of the Public Health Worker are numerous and varied. Already a deeper significance of the big scheme of helpful living is drawing us closer and is grasping the full purpose of the work, the understanding of those for whom we work is increasing. We have learned that Health and Health Activities must be fashionable if they are to prove successful, and so it is with the Juvenile Health Organizations; they are fashionable in Dillon County therefore successful.



## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

The June number of the Southern Medical Journal contains some excellent articles dealing with the New Born Infants. A general practitioner, obstetrician or pediatrician who carefully goes over these can not help but be benefited. Clifford G. Grulee in discussing the care and the feeding of the New Born points out that the death rate during the first month of life has not been lowered, notwithstanding the excellent work done, and being done in pediatrics. He claims too that many of the gastro-intestinal disorder originate in the first two weeks. He emphasizes very rightly the fact that accurate scales are a necessity in determining how much breast milk is being obtained, and that apparent comfort or even sound sleep in the nursing is not inconsistent with insufficient food. There is often too little milk in the breast for several days and here it is where complemental feeding is of so great value. It is still true that many doctors take the baby off the breast without a moments hesitation, and most often without any real reason. The use of a simple mixture of equal parts of whole milk and water with the addition of some variety of dextri-maltose is advocated. Usually as much as three ounces at a feeding is offered. Colic which has caused more loss of sleep to parents, and annoyance to the doctor than any other pediatric symptom-complex may be the result of indigestion or, not that, but hunger. The feeding of some protein solution with regulation of feeding time and the amount is helpful in many cases.

In the same number Dr. Litzenberg in his paper entitled "Better Newly-Born Pediatrics" state that nearly 5% of all babies die at birth or during the first day. He suc-

cinctly though clearly reviews certain topics of importance, as prematurity, feeding, control of heat loss, aseptic care, hemorrhagic disease, hospital facilities, etc. He strongly advocates the plan of teachings and practicing newly born pediatrics in our hospitals, so that the pediatricist and the pediatric department have complete charge of the neonate, just as soon as the cord has been tied. This makes for more attention to the individual infant and also gives a greater opportunity for the study of the normal new born and the better understanding of his diseases. Already many hospitals have put this plan into operation and not a few men in their private practice turn over the infant soon after birth, to one who is anxious and properly equipped to look out for its welfare, rather than to wait until serious abnormalities are manifest.

The general practitioner quite often has the feeling that the importance of a disease or condition is rather exaggerated by one who is interested in that particular line, and that therefore it pays to disregard much that is handed out. In general there is an element of truth in this, for undoubtedly when we begin looking for something hitherto considered rare it soon becomes fairly common; and further a specialist necessarily sees the more serious conditions and is apt to offer a more gloomy prognosis. Nevertheless because of the character and the amount of scientific work done on hemorrhage of the new born, especially in America during the past few years, one is forced to believe that intracranial hemorrhage in the new born is not infrequent and that it has been greatly overlooked in the past. Many cases of death from prematurity, difficult labor, asphyxia and so on were really unrecognized hemorrhage. Dr. John A.

Foote in the Southern Medical Journal of June 1924 has a most comprehensive article on the Diagnosis and Treatment of Intracranial Hemorrhage in the New Born. He reviews the work that has been done and then clearly takes up the symptomatology. He advocates in certain selected cases the prophylactic injection of 20 c. c. of whole blood subcutaneously or intraperitoneally. When the symptoms such as twitching of the extremities or cyanosis have already appeared blood should be reinjected every six hours, for at least three injections. Thromboplastin and horse serum are considered as of lesser value. In this hemor-

rhagic condition we have two distinct phases of the situation to consider, first the site of the bleeding, with the consequent damage from pressure, laceration or necrosis, and further the injury from loss of blood from the vascular system. Foote states that "The loss of two ounces of blood in a five pound baby is more than equivalent to the loss of one-half gallon of blood in a 160 pound man." It is most imperative that all men doing obstetrics should be thoroughly familiar with the signs and symptoms of this far too frequent menace to the Newborn. For while recovery may occur spontaneously, as a rule the result is paralysis, idiocy or death.

## ROENTGENOLOGY

*T. A. Pitts, M. D. Columbia, S. C.*

It is a well established fact that X-rays in proper dosage to malignant cells will result in a destruction of them or render them incapable of further growth. The practical application of this is the preoperative treatment of all tumors particularly where the slightest chance of a malignancy exists and it all too often happens that the pathological findings differ from the preoperative diagnosis.

It has been proven experimentally in humans that transplantation is possibly by the injection of sarcoma cells that resulted in multiple metastatic growths and a carcinoma transplanted from one breast to the other as referred to by Ewing in his book on neoplastic diseases. The experiments with rat carcinoma are quite familiar to all. Every surgeon and radiologist has seen the multiple growths following surgical removal of a tumor, the term "recurrence" has been applied which is a misnomer, these are transplants or cells that were left and continued to grow.

It is generally known that these "recurrences" following any form of treatment are far more resistant than the original growth.

The surgical treatment of malignant tumors of the breast with axillary involvement results is from 5 to 12 per cent cures according to authorities. This has been raised 25 per cent with competent post operative radiation. Dr. Oschner, in a recent article emphasizes preoperative radiation and states that he believes this kills the cells that have progressed beyond the field of operation, produces immunizing substances and prevents grafting of the carcinoma.

There seems evidence sufficient to conclude that preoperative therapy would greatly augment the percentage of cures, however, the medical and surgical profession as a whole do not seem familiar with the benefits to be derived by raying before the surgical attack and the patients are probably not getting all that science has to offer in their behalf.

## MINUTES

*House Delegates 1924 Concluded*

### REPORT OF DELEGATE TO AMERICAN MEDICAL ASSOCIATION

E. A. Hines, Seneca, S. C.

I attended the meeting of the American Medical Association at San Francisco, June 1923 and in order that the Association might be informed immediately of the doings of that organization I published an editorial, upon my return, in the Journal giving in detail the important features of the meeting. In addition the majority of the members of the South Carolina Medical Association now subscribe to the Journal of the American Medical Association and are therefore informed in that way. I was honored by an appointment on the Committee on Amendments to the Constitution and By-Laws. Twice in recent years I have served as Chairman of important committees. For thirteen years I have been appointed on some committee each year. This long service has enabled me to become familiar with the workings of this the greatest medical organization in the world and to know personally all of its officers and most of the delegates. The latter vantage point probably has much to do with the acceptance of our invitation by the distinguished President Elect who will address you tomorrow.

### REPORT OF STATE BOARD OF HEALTH

President and Members of House of Delegates Medical Association of South Carolina: Gentlemen:

It is gratifying to point out that the State Board of Health has at the present time a complete organization working effectively through a number of bureaus and departments under the direction of the State Health Officer in all fields of public health. The results of these numerous activities are set forth in detail in the various reports to which you are referred. The most striking illustration of what can be accomplished by intelligently directed effort is afforded by the very marked decrease in the number of deaths from malaria. In 1916 the death rate per 100,000 was 18 and in 1923 (11 months) it had fallen to 6. Captain L. M.

Fisher, who is in charge of this work says: "That for the first time in the history of the department, three months passed in which no deaths from malaria were reported by physicians." There has been a definite increase in the number of deaths from pneumonia, diseases of the circulation and intestinal diseases, but deaths from all forms of tuberculosis, from typhoid fever and pellagra showed a decrease. The most notable increase occurred in the diseases of circulation, the rate rising from 175 to 192.3. The cause of the increase is not clear. Unfortunately the Division of Venereal Disease Control was seriously handicapped during the year by the failure of the General Assembly to make an appropriation for this specific purpose, but the cities and counties of Greenville, Spartanburg and Orangeburg placed their appropriation in the State treasury to match the sum of \$1592.77 given by the Federal Government so that a small amount was available. The importance of doing everything possible to control venereal diseases cannot be emphasized too strongly, and we urge that the Association use its influence to have the appropriation for this purpose restored. A new feature of public health was inaugurated by the establishment of the State Dental Clinic under the Department of Rural Sanitation with Dr. E. A. Early as director. County Clinics have been established in eleven counties, and six or eight more will soon follow. Already 4973 cases have been examined; 2292 have been treated, and 8688 operations have been performed.

The General Assembly at the recent session provided a fund of \$5000 to pay for the fees and medical attendance in the case of indigent children requiring orthopedic service; no part of which, however, is to be paid the attending physician or surgeon. The Board of Health has appointed Dr. W. A. Boyd of Columbia to do the work.

The report of the Director of the Hygienic Laboratory shows that there has been a decrease in the prevalence of rabies, but we fear that this is only a temporary situation. There is urgent need of legislation providing for the compulsory vaccination of all dogs, which is the only means of prevention that has proved effective. The House of Dele-



gates can aid the cause by putting itself on record as favoring the enactment of the necessary law, and we recommend that this be done.

The reports of the Department of Rural Sanitation, the Bureau of Child Hygiene, the Sanitary Engineer, the Epidemiologist, the Chemist and the Hotel Inspectors all indicate the splendid and efficient work that is being carried on in every field for the improvement of health conditions.

Robert Wilson, Jr., M. D.,  
Chairman.

#### REPORT OF THE COMMITTEE ON THE STUDY AND PREVENTION OF TUBER- CULOSIS

Mr. President:

There are now available for the care of the tuberculosis in South Carolina, 209 beds; of these 108 are in the state institutions, and 101 in county and private institutions. Provision was made for the establishment of a county sanatorium in Charleston County by the legislature of 1924, \$20,000.00 being appropriated for construction of buildings, equipment and maintenance; while \$45,000.00 were provided for improvements at the State institutions.

During 1923 tuberculosis clinics were held in the following counties: Abbeville, Anderson, Darlington, Horry, Greenwood, Lancaster, Pickens, Newberry, Orangeburg, Spartanburg, Sumter.

There were 2258 school children and 1950 adults examined. Of these 319 were actively tuberculous and 93 were suspects. This high per cent of positive findings is due to the good work of the health nurses in presenting suspicious cases at the clinics. These findings also argue strongly for periodic physical examinations; a question which deserves careful consideration by every physician and a procedure which will do much toward discovering early cases of tuberculosis. The American Medical Association has provided blanks as guides for such examinations. It is hoped that this body will go on record as favoring annual physical examinations by the apparently healthy.

The death rate from tuberculosis is falling throughout the nation and in S. C., yet 1759 died in the state in 1923—over 300 of whom died without medical attention. No doubt that all of these latter and many of the others were foci for disseminating infection. That

practically one-sixth of those who succumbed to tuberculosis died without medical attention is a potent reason for increasing sanatorium facilities within the state. Will not this body record itself as favoring such development.

—The Committee.

#### REPORT OF NECROLOGY COMMITTEE

Mr. President, and Fellow-members of the South Carolina Medical Association:

As "the year has rolled itself around again to meet the day" when we come together for fellowship and mutual aid, we find that the "Sunset and evening star, and one clear call" has come to quite a number of our fellow-workers.

We miss them from our ranks, and still more are they missed from the respective communities in which they labored, for, as a rule, they were men who "stood firm before their fellows and their God," and their lives here on earth were filled with deeds of charity and of love.

We can not go into details as to the accomplishments, the virtues, and the noble traits peculiar to each, but we all know these men were strong, heroic souls, who ever trod the path of duty, and as they have passed into the great beyond "sustained and soothed by an unflinching trust," let us hope that they are now "breathers of an ampler day for ever nobler ends."

Some names may have been omitted from this report, and, if so, we would be glad for you to call such omissions to our attention.

The record, as we have it, is as follows:

**Samuel Lanham Allen**, born in 1885; A. B. Wofford College; graduate of the Medical College of the State of South Carolina, Charleston, 1912; member of the South Carolina Medical Association; aged 38; died April, 20, at the Spartanburg Hospital, Spartanburg.

**Archie China**, born in Sumter, S. C., June 21, 1865; School in Sumter and South Carolina Military Academy; graduate of the Medical College of the State of South Carolina, Charleston, 1889; aged 58; died January 6, Sumter, S. C.

**Charles Henry Esdorn**, born in Charleston, S. C., Dec. 6, 1879; graduate of the Medical College of the State of South Carolina, Charleston, 1901; member of the South Carolina Medical Association; past president of the Colleton County Medical Society; aged

43; died, November 13, of heart disease; Walterboro, S. C.

**William H. Hope**, born in Yorkville, S. C., in 1888; Wofford College; graduate of the Atlanta, (Ga.) College of Physicians and Surgeons, 1910; aged 35; on the staff of the Wallace Thompson Hospital, where he died suddenly, June 8, of internal hemorrhage; fellow of the American Medical Association, Union, S. C.

**Thomas Roland Howle**, born in 1880; graduate of the University of Nashville (Tenn) Medical Department; 1906; aged 43; died Nov. 7, 1923, Andrews, S. C.

**George Evans Means**, graduate of the Tulane University of Louisiana, New Orleans, 1889; Spanish-American War veteran; aged 57; died July 16, Wellford, S. C.

**Joseph Francis Munnerlyn**, born in Choppee, S. C., June 9, 1889; A. B. 1910 Wofford College; graduate of the University of Maryland School of Medicine, Baltimore, 1914; member of the American Psychiatric Association; fellow of the American Medical Association; director of the State Hospital for the Insane; aged 34; died, August 25, following a long illness; Columbia, S. C.

**Thomas Pennel**, born in Anderson, S. C., 1883; graduate of the Atlanta (Ga) College of Physicians and Surgeons, 1913; aged 40; died, June 29, at a hospital in New York, of pneumonia; Belton, S. C.

**John M. Sease**, born in Lexington County, S. C. Dec. 7, 1861; Newberry College A. B.; graduate of the University of Maryland School of Medicine, Baltimore, 1886; aged 62; died November 28; Little Mountain, S. C.

**Charles Rhett Taber, Jr.**, graduate of the Kentucky School of Medicine, Louisville, 1893; aged 53-- died, October 8, at a hospital in Fayetteville, S. C.

**Joseph Frederick Watson**, born in Marion, S. C., Oct. 7, 1851; graduate of the Louisville (Ky) Medical College, 1892; aged 71; died suddenly, August 20 of cerebral hemorrhage; Lamar, S. C.

**James William Williamson**, graduate of the College of Physicians and Surgeons, Baltimore, 1886; aged 64; died suddenly, January 11; Hartsville, S. C.

**B. A. Mattison**, born in 1858; graduate of the Atlanta (Ga) Medical College, 1883; member of the South Carolina Medical Association; aged 65; died, June 3, at Augusta, Ga., of hemorrhage, following operation for pancreatic cyst.

**James Edward Allgood**, Atlanta College of Physicians and Surgeons, 1902; a much loved member of the Pickens County Medical Society; aged 43; died January 29, of peritonitis, following an operation for strangulated hernia.

**S. Gilman Glover**, born in Charleston, S. C., September 19, 1883; graduated from the University of Maryland in 1908; president of the South Carolina Pediatric Association at the time of his death; died March 22, 1924; Greenville, S. C.

**William Brooks Patton**, University of Georgia, Medical Department, 1889; died March 7, aged 56; of heart disease; Cross Anchor, S. C.

**William P. Cornell**, born May 27, 1878, in Perth Amboy, N. J. Graduated Medical College of South Carolina in 1898; for a number of years professor of Pediatrics, Medical College of South Carolina; first President of South Carolina Pediatric Society; associate editor South Carolina Medical Journal; gave freely of his time to children's Clinic; died February 23; Columbia, S. C.

**David Oliver Leonard**, born 1865; graduated University of Maryland 1888; practiced medicine at Reidsville, S. C., until 1920; died in Spartanburg in February, 1924.

**Oscar M. Chapman**, born 1884; graduated University of Tennessee; general practitioner at Chesnee died in March, 1924.

**Clarendon Witherspoon Barron**, born Oct. 11, 1872, Manning, S. C. Graduated Medical College of S. C. 1895. Major in world War. Over seas 18 months, Commander Base Hospital No. 9 Chateaufvillian, Haute marne, France. Died, April 4 1924, Columbia, S. C.

**A. M. Redfern**, 27 years College Surgeon at Clemson, died at Charlotte, N. C. Buried in Chesterfield, S. C.

And thus life goes, we know not why, nor what life is, nor whence it comes, nor where the soul may lie, but this we do know, that while the dust returns to dust, their souls shall live eternally.

And we now commend them to  
"That God which ever lives and loves,

One God, one law, one element,  
And one far-off divine event  
To which the whole Creation moves."

Respectfully submitted,

J. C. Harper, Chairman.

J. L. Bolt,

J. S. Stribling.

REPORT OF THE STATE BOARD OF  
MEDICAL EXAMINERS OF S. C.  
FOR THE YEAR 1923

Applicants for Examination.

Doctors June Examination 33; November Examination 7 Total	40
Nurses June Examination 50; November Examination 44 Total	94
	<hr/>
	134

**Doctors**

White males	34
Colored males	2
White females	3
Colored females	1
	<hr/>
	40

**Nurses**

White	88
Colored	6
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	94
	<hr/>
	134

The Board met at Columbia, S. C. in July and December 1923 to tabulate the grades made by the applicants at the June and November examinations, with the following results:

**Doctors**

White passed	37
Colored passed	3
White failed	0
Colored failed	0
	<hr/>
	40

**Nurses**

White passed	79
Colored passed	1
White failed	9
Colored failed	5
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	94
	<hr/>
	134

A. Earle Boozer M. D. Secretary.



## SOCIETY REPORTS

### MEETING OF FIFTH DISTRICT MEDICAL ASSOCIATION

With about four score physicians in attendance, including many outstanding leaders of the profession, the regular spring meeting of the Fifth District Medical association was held at York, May 22. One of the medicos on the program for a paper was a surgeon of nation-wide prominence, Dr. J. Shelton Horsley of Richmond, Va. Morning and afternoon sessions were held and at the latter Chester was chosen as the next meeting place, the time to be in November. The following officers were elected: President, Dr. C. S. McCants, Winnsboro; vice president, Dr. Cox, Chester; secretary and treasurer, Dr. G. A. Hennies, Chester.

The meeting opened at 11 o'clock in the city hall with Dr. John I. Barron of York, president of the organization, in the chair. The Rev. N. E. Smith made the opening prayer, after which Mayor E. A. Hall delivered an address of welcome. The visitors were then welcomed to York on behalf of the physicians of the town by Dr. W. E. Erwin, 87 years of age, who was graduated from the South Carolina Medical college at Charleston in 1860. Dr. Erwin, who, despite his years, is almost as agile physically as a school boy and quite as alert mentally

made a decidedly favorable impression on the visiting medicos and was an object of interest to them throughout the day, many inquiring of him the secret of his apparent perennial youth.

Papers read at the morning session, which were discussed at length and from different angles, were: "A Few Fundamentals to Be Observed in Handling Prostatics," Dr. A. J. Crowell, Charlotte; "Pyelitis of Infancy," Dr. E. W. Barron, Columbia; "Head Injuries," Dr. W. B. Ward, Rock Hill.

At the afternoon session Dr. J. Shelton Horsley of Richmond, Va., read an interesting and instructive paper on "Ulcers of the Stomach and Duodenum," which contained a wealth of information on that subject. Dr. C. S. McCants of Winnsboro read a paper on "Medical Treatment of Ulcers of the Stomach," this bringing the program to a close.

The visiting physicians and the home medicos were given an appetizing dinner at 1:30 o'clock in Festal hall of the McNeel Memorial building.

Among the prominent physicians here from beyond the bounds of the Fifth district were: Drs. J. P. Munroe, A. J. Crowell, H. W. McCoy, J. G. Johnson and J. R. Ashe of Charlotte, S. E. Harmon, Bruce Edgerton, George Bunch, Hugh Seibels and E. W. Barron of Columbia.

## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### GUMMA OF THE THYROID

Williams and Steinberg of the department of surgery, Medical College of Virginia report two cases of thyroid gumma in the *Journal of Surgery, Gynecology and Obstetrics*, June, 1924.

Gumma of this gland is rare. Syphilis very infrequently manifests itself in this way.

Text books and monographs on lues but rarely mention it in the briefest manner.

In 1910 Davis reported 19 cases of gummatous thyroid and Schneider added another in 1918. Others have recorded a parenchymatous enlargement of the thyroid associated with the secondary stage of syphilis and this enlargement has disappeared under antileutic treatment. These, however, were not true bummas.

One of the cases reported was an obese woman, white, aged 60, with a negative previous personal history. Her present illness began five months previously with difficult breathing and a severe cough. Soon after their onset, she noticed a mass in right lower neck anteriorly. This mass grew very slowly, it was very hard and her symptoms increased in severity rapidly. Though the mass was not freely movable, yet it was not attached to the skin. Behind and to the outer side of the mass was a second smaller lump which apparently was adhered to the skin. She had a four plus positive blood wassermann. The smaller subcutaneous mass was removed under local anaesthesia and the pathologist diagnosed gumma.

Vigorous specific treatment was instituted and two months later the tumor had

disappeared, the cough had ceased and the dyspnea was gone.

Their second patient was a negress, aged 44, who nine months previously had noticed a lump forming in the left side of the neck near windpipe. It slowly enlarged in size and four months later began to cause marked dyspnea and severe cough. Lifting her left arm above her head made breathing almost impossible. All laboratory examinations were practically negative except for a four plus positive blood wassermann and a 26 metabolic rate.

The mass was explored through the usual transverse incision and it was found to be densely adherent to the trachea and surrounding tissues. The pathologist diagnosed "Gumma," after examining a small portion of the tissue. The patient was later given anti-leutic treatment and two months later was greatly improved.

The histories as recorded, markedly resemble carcinoma of the thyroid, and the condition could only have been differentiated by histologic study.

The gumma, when situated in the thyroid may be small or large, it may or may not be fastened to the skin. Its motility is measurably restricted due to attachment to contiguous structures. It is very hard and usually nodular.

The voice is usually changed to one of hoarseness and there is great dyspnea and much cough of a harsh brassy quality.

The condition is fairly amiable to treatment and in consequence thereof, prognosis is good.

It very closely simulates cancer, but can be readily differentiated by microscopic study.

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

Eipstaxis in a Hemophilia reported by Dr. Joseph B. Kanter, in "The Eye, Ear, Nose and Throat Monthly," July 1924.

Nasal bleeding is the doleful experience of all nasal surgery, so we like to learn more about its control. This case, however, came as a result of a slight fall on injury to his nose. It was packed by the local doctor, but recurred in spite of the packing. In the treatment of the bleeding, Thrombo-plastin 20 c. c. twice daily was given for eleven days; some was given before that. Calcium Lactate grs. xx every three hours. Gelatin 3 iv three times a day. Human serum and horse serum failed to benefit. Anemia and weakness controlled by Citrate blood transfusion, 300 c. c. was given and in four days later another 300 c. c. was given and in three days 450 c. c. more, each time causing a more severe reaction than the time before.

Packing (rubber covered Berney sponges) changed every two to five days. At the last

part of the time dental wax was molded to fit nose and held in place by Berney sponges was used. Later the dental wax was put on hollow nasal splint. Complication abscess in ear.

Citrated blood said to increase coagulability of blood when injected into circulation. In all about 350 c. c. of Thrombo-plastin was given, once intravenously with prompt results. This case recovered.

He mentions another case that did not recover. So the blood transfusions may seem heroic treatment in view of the reaction they cause they may have been the supporting factor that enabled recovery.

One case reported somewhere lately continued to bleed till Thyroid extract was used. whether the cessation was coincident or not I do not know. Surgical Pituitin has been advised, but it was not used in this case. I would be interested to hear a discussion on this subject.



## BOOK REVIEWS

**1923 COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION,** Rochester, Minnesota. Octavo of 1377 pages, 410 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$13.00 net.

**OPERATIVE SURGERY.** Covering The Operative Technic involved in the operations of general and special surgery. By Warren Stone Bickham, M. D., F. A. C. S. Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5400 pages with 6378 illustrations, mostly original and separate Desk Index Volume. Volume 4 containing 842 pages with 772 illustrations. Philadelphia: and London W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free.

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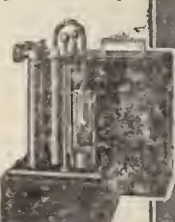
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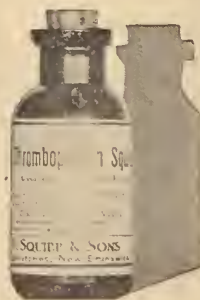


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## EDITORIAL

### SPECIALISM AS VIEWED BY S. WEIR MITCHELL

In a delightful little book "*Doctor and Patient*" published by Lippincott in 1901 S. Weir Mitchell, the distinguished Neurologist and novelist, expressed himself very freely in regard to the benefits and limitations of specialism as follows:

"A final result of the multiplication of the means of research, and the increasing difficulty in becoming expert in the use of many and delicate instruments they require, is the growth of what we call specialties in medicine. The best of us learn to use the ophthalmoscope to look into the eye, the use of the laryngoscope for the larynx, and can at need examine the urine and the blood, but the men must be rare who are as compe-

tent to use each and all of these means as persons who devote themselves to single branches of our work. Moreover, the element of time comes in, as well as the element of such constant familiar practice as makes for one man commonplace and easy what for another, who is more generally occupied, is uncommon and unfamiliar. The specialist profits by the fact that his experience becomes enormous and his work advantaged by its definite limitations. On the other hand and nowadays, especially, he is too apt to be one who, after brief hospital work of general character, or without this, takes up, as we say, the eye, ear, throat, and uterine organs. Unless he has had at sometime a large and more varied experience, or unless he is a most unusual man, he is prone at last to lose sight in his prac-

tice of the fact that eye, ear, and womb are parts of a complicated mechanism, and suffer through its general and local disorders. Hence the too common neglect of constitutional conditions, to which are often due the apparent maladies of the organs to which he devotes himself. Moreover in certain of the organs of sense, as the eye, are frequently seen the first signals of spinal or other maladies, and if as too often happens,

he sees in some such sign or symptom only the evidence of local trouble, and neglects to look or reason beyond it, he may inflict on his patient the gravest penalties, by depriving him of the chance of early treatment of some serious disease, involving lifelong or even fatal, consequences. This is a criticism on the man and his training, not on the system of specialties which has become invaluable."

## ORIGINAL ARTICLES

### AMEBIC DYSENTERY WITH SPECIAL REFERENCE TO TREATMENT

By *W. A. Wallace, M. D., Spartanburg, S. C.*

Amebiasis is probably one of the oldest diseases—Chronic Dysentery being referred to by some of our earliest writers—but it was not until 1875 that Losch observed Amebae in Dysenteric stools, and he suggested this organism as playing a causative role in Dysentery. It remained for Kartulis, in 1885, to call attention to two forms of Dysentery: an endemic form due to the Amebae and an epidemic type due to Bacteria. This distinction of the diseases was generally accepted in 1900 when the etiology of Bacillary Dysentery was fully established. In 1891 Councilman and Lafleur called attention to the striking lesion, or cysts, whenever the Amebae had penetrated the intestinal mucosa; and to these workers we are indebted for the simple but appropriate name, "Amebic Dysentery."

It is certain that there are three distinct groups of Amebae occurring in man:

1. The Parasitic and Pathogenic Group, *Entameba Histolytica*.

2. The Parasitic and non Pathogenic Group, *Entameba Coli*.

3. The non Parasitic, non Pathogenic, *Limex Amebae*.

The *Entameba Histolytica* is the only *Entameba* which is widely distributed and which is pathogenic to man. From time to time, investigators have discovered apparently new pathogenic Amebae, but in all cases, so far, the different forms have proven to be different cycles of the original organism—*Entameba Histolytica*.

The *Entameba* is highly parasitic. It does not develop outside the animal host in nature, and thus far has resisted to a very great extent, all known cultural methods. Recently, Cutler has reported cultivation of *Entameba Histolytica* on a medium composed of finely divided particles of coagulated egg, suspended in milk. Multiplication occurred only in a small percentage of the culture tubes. From these, he was unable to isolate the Amebae from the contaminating Bacteria, or to isolate the organism which is definitely the off-spring of a single cell.

Thus, you see that the study of the Amebae is one of the most difficult problems with which we are confronted today. There is no doubt that it is a cause of Dysentery, but, so far, growing the organism artificially has been a failure. Baetjer and Sellards succeeded in transferring Amebae

from man to the Caecum of kittens, and produced in these animals, frequent bloody mucous stools, containing the typical Amebae.

Amebic Dysentery occurs abundantly throughout the tropic regions, and is endemic in the temperate zones, only rarely found in the colder climates. The Amebae, both in the motile and encysted forms, leave the body by way of the intestinal tract. Neither of these multiply after leaving their hosts. It was formerly thought that the contamination of water supply was the most frequent source of infection, but more recently, typical Amebae carriers have been found to occur frequently, and, as in the case of Typhoid Fever and Diphtheria, these individuals play an important role in the distribution of this disease. Another similarity to these diseases which is rather striking is the fact that we find individuals carrying Amebae who themselves have never had an attack of Amebic Dysentery. The Amebae is able to penetrate the uninjured mucosa and to burrow its way down into the muscular layer, though it seldom is a cause of perforation; but by getting into the venules of the Caecum, thus entering the portal circulation, it is one of the most frequent causes of Abscess of the Liver. This disease usually starts in the Caecum, or at least, in the upper portion of the Colon, and, as it progresses, frequently involves the full length of the Colon. The lesions have so far never been demonstrated in the Ileum, though it does seem reasonable to suppose that a motile organism that is so resistant to the natural protective agencies of the human body could, by proximity, work its way from the Caecum to the Ileum, and there act as a source of re-infecting the Colon after treatment. This is merely conjecture as a possible explanation for the frequent recurrence of Amebic Dysentery after recognized treatment, though, at the present time, the formation of cysts is the accepted explanation for frequent recurrences.

The incubation period is variable, but it is probably from twenty days to three

months. The symptoms may commence suddenly or insidiously; if an attack is untreated, it gradually subsides of itself in the majority of cases; but after an intermission of a few weeks or a few months, typical relapse occurs. It is possible for the *Entameba Histolytica* to remain latent in the bowel for a remarkably long period. After several relapses have occurred, the symptoms may subside, though frequently the Amebae persist in the stools for months and years; thus the individual becomes a carrier. More often the disease passes into a chronic form, the invading Bacteria gain a firm foothold in the ulcerated areas of the intestines, and chronic continuous Diarrhea develops; Secondary Anemia supervenes, the patient gradually becoming emaciated and exhausted. Lesions of the Appendix from the Amebae are not infrequent, but typical suppurative bacterial Appendicitis is uncommon. There are a few cases on record where the *Ameba Histolytica* has invaded the Genito-Urinary tract.

Diagnosis is made from the history and from examinations of the stool. The stool should be examined for cystic forms as well as for the motile form. In all cases it is advisable to examine the patient very closely for involvement of the Liver.

In treatment, Ipecac has long enjoyed the distinction of being a drug deadly to the Amebae. This drug has been employed in various ways, as by Mouth and by Colonic irrigations. It has also been employed following Appendicostomy. On account of its nauseous action on the Stomach, Salol coated pills of Ipecac were used for a time, then, later on, Emetin was used and is still enjoying favor. The average dose of Emetin is one grain, once daily, given intramuscularly. In the tropics, the natives more frequently use a member of the family of "Simarubacea," and report success from this in the treatment of Dysentery, provided it is of the Amebic type. A member of this family is the "*Castella Nicholsoni*," which occurs in Southern Texas and Mexico, and is known as "Bitter Bush."



Relapses from any recognized treatment are frequent. MacAdam reports eighty cases treated, using one and one-half grains of Emetin daily for twelve days—one grain being given hypodermatically and one-half grain by mouth. Eighteen relapses occurred, which, from the literature, seems to be a very good average. For eradication of cysts from carriers, the treatment at present consists of a thorough course of Emetin Bismuth Iodid, given in Salol coated pills, three or four grains daily, at one dose, until a total of thirty-six or forty grains has been given. Even after this treatment, the cysts persist in about one-fourth of the cases.

The one case which I have to report was treated by Ipecac and Quinine, but administered, so far as I know, in an original way; though Dr. Einhorn used a similar method with a different drug in the treatment of Chronic Colitis.

This patient, a man, 29 years of age, unmarried, printer by occupation, complained of Dysentery. Has lived in South Carolina all of his life. The family history is negative, as is his personal history until he became ill with Dysentery in 1912. His stools showed *Ameba Histolytica* in fairly large numbers. Since the on-set of his illness in 1912, he has taken numerous treatments—Ipecac by Mouth, by Rectum, Emetin by Mouth, by hypodermic, Quinine by Mouth and by Rectum. He has had the ulcers in the Rectum cauterized; he has taken Alcresta Ipecac tablets, number of pills, and he has used oak-bark tea—the latter, I believe, his own prescription. Several of these treatments were given while he was in camp in the recent war. One of these treatments relieved his symptoms for one month, the others for a shorter time. I saw this man in June 1923, at which time he was having six to eight muco-sanguinous stools a day, and showed *Amebae* in large numbers. He was somewhat emaciated, be-

ing about fifteen pounds under his original weight. He was admitted to the hospital on June 7, 1923, and a Rehfuß Duodenal Tube was passed. Several short lengths were used until we had fifteen feet of tubing down the intestine. The tip was then located with the X-Ray, and was found to be in the upper portion of the Ileum, the tube having curled somewhat in the Stomach and Jejunum. He was given thirty grains of powdered Ipecac in a suspension through the tube. This caused considerable nausea, and later, several large watery stools. Another length of tubing, approximately fifty inches long, was hung on at the mouth, and as soon as this was in place, we started regular irrigations. He was irrigated through the tube once daily, with forty grains of Ipecac, in suspension, in the afternoon, and once daily with twenty grains Quinine Bisulphate in Solution in the morning hours. At the end of five days, the tube was cut loose at the mouth and allowed to pass. The tip passed at the end of seven days from the time it was cut loose. This man was discharged from the hospital on June 18, 1923, and so far, up to the present time, he has not had a recurrence of his symptoms; and on repeated examinations of his stool, we have been unable to find *Amebae*. He did not show any untoward action from the treatment other than the nausea following the first irrigation. His diet throughout was liquid and light.

In the selection of a case for treatment by this method, we must not lose sight of the fact that narrowing of the Intestinal Lumen at any point is a contraindication. It is therefore necessary to determine the presence or absence of constriction in a given case by the use of the X-Ray before passing the tube beyond the Duodenum. Such a precaution renders the procedure safe, and has the advantage of permitting us to use direct irrigations, beginning at any point in the Intestine which we may select.

## MODERN DERMATOLOGY

By J. Richard Allison, M. D., Columbia, S. C.

Dermatology as a specialty when compared to other special branches of medicine is comparatively a new subject. This is especially true in the South. In a paper entitled, "Dermatology in the South" by Dr. J. B. Shelmire, of Dallas, Texas, read before the section on dermatology at the Southern Medical meeting in Washington last fall, a short history of dermatology in the South was outlined. St. Louis, Baltimore, Washington, and New Orleans it seems were the only cities where dermatology was practiced as a specialty until the last few years. During the past five years, the younger men, interested in this line of work, have settled in the different southern cities.

The difficulties encountered by these men have been many. The first great difficulty has been the attitude of the doctors to the new specialty. "The average doctor in his student days devoted very little time to skin conditions; he learned to use sulphur, ammoniated mercury and calamine lotion. His attitude towards dermatology is very much like that of Dr. John Hirst, as expressed in the following sentence, "all skin diseases are divided in two classes, those you can cure with sulphur and those you cannot." With such attitude on the part of the medical profession, dermatology as a specialty has had very little opportunity for advancement. Many important skin conditions today are treated in beauty parlors, especially the scalp and facial conditions. Sometime ago a young college girl came to my office, referred to me by one of her friends as "the beauty doctor." In the past, the Roentgenologist has treated the majority of referred skin conditions. While many X-Ray men are qualified to treat malignant conditions of the skin, having made a study of such

conditions, and naturally equipped with the necessary appliances, yet with the average dermatoses they are no better qualified than the general practitioners to practice dermatological therapy.

A second great handicap to the dermatologist in the South is the prevalent idea among the laity in general and certain physicians in particular that skin diseases are either some form of scabies or venereal, the patient often suffering from a totally unnecessary and unwarranted humiliation, as well as the physical suffering from the dermatoses. In many instances, to the attitude of the general practitioner, this blame can be justly laid. It is true that syphilis, the greatest of all diseases, manifests itself more as a dermatological condition than in any other way; that the dermatologist is trained more thoroughly in syphilology; and that through the studies of the dermatologist the greatest advancement has been made in syphilology. For these reasons, the proper place for syphilology, it seems to me, would be with the dermatologist. In the South everybody down to the drug store clerk makes an attempt at syphilitic therapy.

A third great handicap is the great distance from the medical centers where the subject of skin diseases is taught and where there are clinical facilities for teaching and study.

Notwithstanding the above mentioned difficulties, it is believed that there is a great future for this branch of medicine in the South. As one southern dermatologist aptly puts it, "everything grows very luxuriantly in the South," and as the majority of dermatoses are due to bacterial growth, vegetable parasites, and exposure to tropical and sub-tropical sunlight, we are not lacking for dermatological material in this country.

Since skin disease is such an important branch of medicine, of which so little is known by the average practitioner, it is well to consider in a general way the present status of dermatological therapy today. It is now recognized that the skin is an important organ which is closely related to the

general economy, therefore, in this branch of medicine, as well as in other specialties, it is very necessary to have a general knowledge of internal medicine in order to treat such conditions successfully. It is often necessary to utilize all facilities used in general medicine, such as laboratory, histological, bacteriological and bio-chemical examinations, sensitization tests, and search for focal infection in order to arrive at a rational diagnosis.

It is well known that certain skin conditions are caused by certain proteins and pollens. We have skin tests today which have been of aid to us, not only in a diagnosis of the cause of the conditions, but enables us to attain a cure by either desensitizing the patient to that particular protein or removing the offending article from contact with the patient or from the food as the case may be.

In all fungus infections a diagnosis is made by the laboratory findings from the spores from scrapings obtained from the lesions. These conditions are very prevalent in the South. The great majority of scaly and vesicular eruptions about the hands and feet and even the body are due to a fungus infection. Formerly these conditions were classed as eczema, or a peculiar disease called pomphlox. Fungus infections open to the dermatologist a wide field for study, more than nine hundred (900) different fungi have been isolated and studied, yet only a few of that number have been proven to be pathogenic in skin diseases. However, it is firmly believed that that great class of skin diseases so loosely grouped under the general head of eczema, which has been facetiously described as "a moist, vesicular scaly eruption, the cause of which is not known" will in the future be greatly decreased by further study of fungus infections. It is my personal belief that in the not far distant future, the word eczema will be relegated to the shelf for good.

We must not confuse these obscure fungus infections with the well known clinical entities already described and worked out

thoroughly, commonly called ring-worm of the scalp, beard and groin, the classical names of which are *tenia capitis*, *tenia sycosis* and *tenia cruris*. These three particular infections while belonging to the general classification of fungus infections are not new diseases. The successful treatment, however, is comparatively new. In recent years ring-worm of the hairy regions has been cured by X-Ray. Ring-worm infections of the hairy region, extends to the root of the hair follicle and it is practically impossible to cure ring-worm of these regions with local applications. In recent years, we have learned to measure the X-Ray dosage sufficiently accurately to epilate the hair completely without permanently destroying the hair follicle, in that way curing obstinate ring-worm infection at one sitting which formerly took years to cure. Ten years ago there was a school in London for children who had *tenia capitis* because the condition was infectious and the average time required for a cure was two years. In fungus infection of the hands and feet, however, the X-Ray is not so efficacious. There is still great diversity of opinion as to the best method of treating these conditions. Recently Whitefield of London has advocated an ointment of salicylic and benzoic acid, known as Whitefield's ointment, which seems to be the best local application advocated up to the present time.

The present status of syphilitic therapy is generally fairly well known and need not be discussed here. Recently, especially in the South, another obstinate and formerly incurable condition has been added to the field of dermatology, *granuloma inguinale*. This a tropical and sub-tropical disease, due to the leichmans-donovan bodies and was formerly known as ulcerating-pudendal sores, and phagedenic chancroids. Many of us in South Carolina have studied these conditions recently, notably Lynch of Charleston and it has been quite a surprise to find the condition so prevalent in this country. Tartar emetic in a 1% solution given intravenously acts almost as a specific in the



early cases if continued for a sufficient length of time. It has been my experience to see several cases cured and several late cases which have gone on, ending fatally in spite of treatment.

In the local treatment of skin diseases we have a number of agencies, both physical and chemical, which are used to an advantage. Of the chemical agents, the most recent and noteworthy advancement has been the application of crude coal tar as recommended by C. J. White of Boston. This is a mixture of coal tar, zinc oxide and starch. The preparation was first used in infantile eczema and was found to have remarkable influence in these cases. Many extreme inflammatory conditions of several months standing in young infants have been cured with only a few applications. Heretofore, we have been at a loss for local remedies to cure infantile eczema, many cases continuing on in a horrible state in spite of all treatment until a year or so old when the diet was materially changed. The use of this coal tar preparation is not confined entirely to infantile eczema. Many chronic conditions in adults respond favorably to its use. There are many other local remedies that could be well discussed in an exhaustive paper on this subject.

The X-Ray in my opinion is the most important single agent we possess at the present time for the treatment of skin diseases. It has many advantages over the other remedies heretofore used. First, it can be used over a wide area in a minimum of time. Second, its dosage can be accurately measured. This has been well proven in its application in the treatment of tenia capitis. With the X-Ray we are able to administer 1 1-4 units of X-Ray to the scalp at one sitting, which will sufficiently inhibit the growth of the hair follicles to cause complete epilation for a period of time, about three months, when the hair will regrow; while 1 1-2 units will cause a permanent alopecia. Third, it has a remarkable inhibitory action on all inflammatory tissue when given certain doses and a remarkable de-

structive action when given in stronger doses. I have found X-Ray so useful and use it so frequently in such a wide-variety of skin conditions that it occurred to me that probably I was using it to the extreme. With that point in view, on a recent trip North, I inquired from dermatologists in regard to the frequency of the use of X-Ray in their practice, and the answers showed me that it ran from 60 to 80% in all skin conditions treated by them.

Radium has much the more restricted field in dermatology, due first to the limited area over which it can be used at one time, and second to the high cost and enormous quantity required in order to treat any extensive dermatoses. It is very probable that radium can do all that X-Ray can in skin diseases, if one had the time and a sufficient quantity of radium. In certain localized malignancies and certain birth marks, it is considered superior to X-Ray by many.

Recently many so called ultra-violet and quartz lamps have been placed on the market and urged by their agents as "cure alls" for all dermatoses. In certain conditions such as alopecia areata, lupus erythematosus and certain vascular nevi, they are considered as good, and by many to be better, than any other form of treatment. It remains true, however, that they are a poor substitute for X-Ray and radium and the claims made for them are exaggerated. For a conservative opinion from one who has used these lamps probably more than anyone else in the United States, one should consult the writings of, Oliver of Boston.

Electrolysis, electro-coagulation and various other forms of electricity are used extensively in dermatology. Electrolysis is used particularly in the removal of superfluous hair and certain cosmetic defects, which treatment every dermatologist is from time to time called upon to do. Electro-coagulation (bi-polar d'arsonval current) is used by many in the treatment of widespread malignancies instead of surgery. It is a great question in many cases of malignancies whether the treatment by electro-

coagulation followed by X-Ray or radium is not superior to surgery followed by X-Ray or radium. It is often impracticable to remove malignant conditions by surgery on account of the cosmetic defects. This may be the reason the majority of dermatologists and roentgenologists prefer electro-coagulation or electrolysis with X-Ray or Radium instead of Surgery. However, no fast rule can be laid down for the treatment of all cases of cosmetic defects and malignancies of the skin.

#### DISCUSSION

DR. ROGER G. DOUGHTY, (Columbia):

Whenever I see a case of dermatitis I feel perfectly helpless, I do not know anything about it, and this talk has seemed to me to show that while the skin men have done a tremendous amount of work, they are only beginning to scratch the surface. The whole

thing means that skin lesions should be referred to the men who are in that specialty. That is the primary thing I gather from this talk.

DR. R. LEE SANDERS, (Memphis, Tenn.):

Just to re-emphasize what was brought out a moment ago, I think dermatology is a specialty to itself, and it has grown by leaps and bounds. It is surprising to see the things brought out in dermatology since I have been interested in the subject. It is my good fortune to work with Doctor Hasse of Memphis, who has become nationally known as a dermatologist, and in the University of Tennessee he has taken over all of the dermatological surgery, and at the same time all the syphilis is being treated by his service. As a specialty it is a big field, particularly in the large cities. I am more and more convinced that dermatology is a man-sized job, and if handled properly a great deal of time and money will be saved.

### SOME PROBLEMS IN RADIUM THERAPY

*By B. B. Steedly, M. D., Director and F. M. Johnson, M. D., Chief of Radium Department, Steiner Memorial Clinic for Cancer and Allied Diseases, Atlanta, Ga.*

#### IMPORTANCE OF SUBJECT

A consideration of any of the phases of a malady which afflicts and is the cause of death in approximately 1/10 of all persons past the age of 40 and not a few under this age cannot fail to elicit the interest of any group of men or women whose chief concern is the alleviation of human suffering and the control of disease. All the more so when we consider the large number of benign tumors or closely allied conditions which either behave in a manner similar to cancer or prove to be precancerous lesions.

#### BRIEF SURVEY OF THE HISTORY OF CANCER THERAPY

A survey of the history of cancer therapy leads one to believe that it has probably received throughout the ages more skilful elaboration than that of any other disease.

The methods used aimed at the total removal, from the body, of the whole of the offending growth; to accomplish which surgery has been the chief reliance. The actual cautery and more recently electric coagulation, dessication, fulguration, etc. have contested the sway of the knife. A more consistent rival of the scalpel, before the advent of the modern electrical contrivances and the newer physical agents, has been the chemical caustic in the form of various "cancer pastes." They still enjoy the approval, even though it be rather indifferent, of certain medical men for a restricted group of cases and they remain, as ever, the panacea of the "quacks."

#### LIMITATIONS OF SURGERY ALONE

Surgery still remains the best single means of combating neoplasms as a whole and the same may still be true for those neoplasms belonging in the malignant class but it must be admitted that our long experience with surgery and the gradual improvement in technique have brought about a degree of refinement of this art which is not likely to undergo much further improvement. While we are grateful for

what it has done and is doing we are aware of its limitations and painfully aware of its dangers when ill advised.

#### IMPROVEMENTS OF RECENT YEARS

A very radical improvement and change in our conception of tumor therapy has occurred during the past two decades. This improvement has followed the discovery of X-Rays and radium. This does not mean, however, that these are necessarily superior to surgery but it affords us a means of successfully treating cases hitherto not amenable to any forms of treatment. I refer especially to advanced cases and tumors in inaccessible locations or so situated that surgical removal would entail the sacrifice of important organs. Lately, they are claiming their superiority over surgery in certain early cases and are already proven superior in many precancerous lesions. However, these agents should not be arrayed against surgery or vice versa as so often occurs in the professional and lay minds. Each has its proper place in our armamentarium and frequently a combination of surgery and radiation gives results unattainable by either alone.

#### INCREASE OF SURGEON'S RESPONSIBILITY SINCE THE ESTABLISHMENT OF RADIATION AS AN IMPORTANT AID IN THE THERAPY OF TUMORS.

We all remember how as medical students we delighted more in the study of actual diseases, their symptoms and treatment, than in the drier subjects of anatomy, pathology, materia medica, etc., the last named I have referred to as the "hard tac" of medicine. The same psychology influences us later in our professional activities—we treat medical cases without inquiring sufficiently into the rationale or *modus operandi* of the remedies. Likewise; we remove pathology without understanding its nature or the whence, how and whether of it. We should constantly endeavor to overcome this inherent weakness and I am bringing out this point now because knowledge of the struc-

ture and natural history of tumors is a *sine qua non* in a judicious choice of or combination of remedies in the treatment of cancer. There are varying degrees of radiosensitiveness in tumors dependent partly upon the type of cell, partly upon the relation of stroma to cells and partly upon the soil in which they grow. As we learn better to correlate certain symptoms and physical signs with definite types of tumor and, when this is impossible, resort, in suitable cases, to a biopsy our choice will have a more rational foundation and our end results will be correspondingly improved. While the twentieth century has, through these newer physical agents, marked a new era in the treatment of tumors and while with each additional year there has been a nearer approach to correct dosage and proper technique of administration it is not without a price. Our knowledge of the structure and natural history of tumors must increase *pari passu*. Thus the responsibility of the oncologist is greater.

#### WHAT IS RADIUM AND WHAT ARE X-RAYS?

While it is not my intention to inflict on you any lengthy discussion of the physics of radiation, I am convinced that a very few minutes devoted to a consideration of the nature of these physical agents will not be amiss. It goes without saying that the busy practitioners who constitute most of my audience have not time to read about such. This is no reflection, in fact, if they did read much along these lines they would probably be neglecting something pertaining to their daily work of vastly more importance to themselves and especially to their patients. To the minds of many not engaged in this work, I imagine that there is about as much mystery surrounding radiation therapy as surrounds the use of the "mad stone" in bites of rabid animals. Radium is radio-active because its atoms are continually disintegrating, i. e. going to pieces. It is often said that radium gives off three kinds of rays, alpha, beta and gamma, but in reality, radium itself only gives off alpha rays which become atoms of



helium gas and the residue becomes radium emanation, another gas, which in turn gives off alpha rays and radium A, which is a solid. By a similar expulsion of an alpha particle radium A is converted successively into other solids called radium B, C, D, E and F, some of which give off beta and gamma rays and constitute active deposit of quick change, the 1-2 life period which is only about 30 minutes. It is the active deposit which gives off beta and gamma rays. The 1-2 life period of radium itself, that is the length of time it takes for 1-2 of the atoms of a given quantity to go to pieces, is about 1700 years. Whereas its next disintegration product, radium emanation, has a half period of 3.85 days. The emanation, because of its flexibility, its capacity to be compressed into a much smaller bulk than its parent radium, and the liability to the loss of the radium itself through theft or accident, is more generally useful and preferable but it is not practicable to use the emanation unless one has a half gram or more of radium. Its use requires the installation of a mercury pump, the radium being left in solution in a safe or vault and connected by glass tubing with the mercury pump. The alpha, beta and gamma rays are comparable to similar rays in an X-Ray tube, the alpha corresponding to the canal rays, the beta to the cathode rays, that is the stream of electronstraveling from the cathode to the anode and the gamma rays corresponding to the X-Rays. The alpha and beta rays represent material particles traveling at great speed, the rate of the former being 11000 or 12000 miles per second but having very little penetrating power not getting through the thin glass wall of its container, not being utilizable therapeutically therefore except in the form of the active deposit. The beta rays travel at an average speed of 40,000 miles per second are negatively charged with electricity, the opposite of the alpha rays and are able to penetrate about 1 cm of animal tissue being consequently serviceable in superficial radiation and, due to their caustic action, play an

important part in the destruction of tumor tissue when minute glass tubes containing emanation are implanted directly into tumors. The gamma rays, though the least numerous, are the most important because of their much greater penetrating power. They are about twice as penetrating as the most penetrating X-Rays which can be produced even with the higher voltages and are like them, electro-magnetic waves traveling at the speed of light, 186,000 miles per second. The penetrating power depends on the wave length, the shorter the greater the penetrating power and the gamma rays like the X-Rays do not come off as a homogeneous bundle of rays but vary considerably in length, the longer or less penetrating being the most numerous. These longer wave lengths are mostly absorbed by the superficial tissues hence the difficulty of delivering a killing dose to a tumor situated some centimeters deep. To overcome this difficulty we use filtration, i. e. cause the rays to pass through certain metals which absorb the rays directly in proportion to the density of the metal and indirectly in proportion to the penetrating power of the rays. Thus the so called soft rays (longer wave lengths) are eliminated by the metal filtration thereby avoiding burning and damage to the superficial tissues which would have absorbed them. The coefficient of absorption of the harder and more penetrating rays (shorter wave lengths) is much less, that is to say there is a more uniform distribution of the intensity of the radiation through successive layers of tissue. It must be remembered, however, that even with the most penetrating rays the deeper parts receive less radiation than the superficial. This difference can be offset in cases where it is possible to use two or more portals through which to treat instead of the usual one. In such case the skin and superficial tissues at any one portal are spared from overdosing while the deeper parts get a portion of the radiation from each portal.

The unfortunate thing about filtration is that by the process the total radiation is

greatly reduced—a few mm thickness of aluminum reducing it about 1-2, 1-2 mm ag. cutting out 95% and 1-2 mm platinum cutting out 97% of the radiation. Thus with the Ag. filtration only 5% of the original bundle and with the platinum only 3% is available for use.

Another factor of prime importance in treating tumors beneath the surface is the effect of distance since, because of the dispersion of the rays radially from a central point, the intensity or effect on the tumor varies inversely as the square of the distance or directly as the sine of the angle. So, in order to approximate an equalization of the effects on the proximal and distal surfaces of the tumor, the radium (or X-Rays) must be placed at a considerable distance from the skin, say 6 to 15 cm, with X-Ray 10 to 20 in. With such distances large amounts of radium are necessary.

Dosage in radium therapy is reckoned in mg. or mc. hours, a mg. and a mc. being the same in value. It is obtained by multiplying the amount of radium mg. or the amount of radium emanation mc. by the time, thus 50 mgs. or 50 mcs. allowed to remain applied for four hours would be 200 mgs. or 50 mc. hours. The quantity and time factors alone, however, would convey very little information, the distance, kind and amount of filtration, method of using, possibility of increase of dosage from cross firing and secondary and scattered radiation all must be taken account of.

Intensity in x-radiation increases directly as the voltage, milliamperage and time and inversely as the square of the skin target distance.

Besides the much greater penetrating quality of gamma rays of radium over X-Rays, the difference between the two is largely one of economy. It is estimated that the filtered radiation of a Coolidge tube operated at high voltage and 5 milliamperes of current will give the intensity of several grams of radium under like conditions of filtration. This is strictly true only for moderate filtration for with heavier filtra-

tion the X-Rays would be entirely eliminated while the harder gamma rays would still penetrate it.

#### LAW OF BERGONIE AND TRIBONDEAU

Clinical experience and experimental data led early to the recognition of the first law of radiation therapy which is, that—tumors composed of rapidly multiplying cells especially those of embryonal type and in particular those of the lymphoid group are the most susceptible to radiation, the degree being dependent on the extent to which these characters are developed. On the other extreme as to radiosensitiveness are tumors derived from adult cells and reproducing adult cells such as squamous carcinoma, neuro sarcoma, osteo sarcoma and many adenomas and other benign tumors.

However, it must not be inferred from these remarks that the destruction of the neoplasm is due entirely to the action of the rays upon the tumor cells. On the contrary, it is due largely, if not chiefly to their action on the surrounding tissues, the vessels of which, capillaries, veins, arteries and lymphatics have their lumina narrowed through thickening of their intima. This materially impoverishes the tumor tissue and helps bring about its destruction. The fibrosis which follows later aids in limiting the extension of the disease from portions of the tumor which may have escaped destruction. This last advantage, however, carries with it the disadvantage of making subsequent radiation less effective. In addition to this local reaction there is believed to be developed in the system a certain amount of resistance from absorption of autolyzed tumor cells.

#### RELATIVE RADIOSENSIBILITY OF TUMORS

Although many factors influence the radiosensibility of tumors and there are individual variations in the response of tumors of the same structural type, yet clinical experience has blazed the way for a rough classification based on their relative radiosensibility into the following groups:

a. Lymphomas; These are the most sensitive and without exception melt away under adequate radiation. They include, besides pure lymphocytomas and lymphosarcomas, also the closely related tumors; endothelioma of lymphnodes, endothelioma of bones and myelomas.

b. Embryonal tumors; These are also quite radio sensitive. They are tumors derived from embryonal cells and retaining embryonal characters. The most familiar example coming under this heading and one of the first treated with radium is the basal cell epithelioma of the skin, called also rodent ulcer. It is the common cancer occurring on the face above the level of the upper lip. The regional glands are not involve and it does not metastasize but extends locally even bone proving no barrier but at this late stage it is more difficult to control. Some cancers of the cervix uteri and of the salivary glands are of the basal cell type. Other embryonal tumors occur in the ovary and testis and the Wilms tumor of the kidney in infants is of this type.

c. Cellular Anaplastic Adult Tumors; These tumors originate from cells of adult tissue in glandular organs, the cells, however, instead of retaining adult characters, hark back, so to speak, and become round cell diffuse carcinomas. Whereas most round cell carcinomas in children react to radiation readily and the end results are better than might have been anticipated. Most round cell diffuse carcinomas in adults offer an exceedingly bad prognosis. Diffuse carcinoma occurring in the breasts of young women are frequently of this type and offer an unfavorable prognosis under any form of treatment even if seen prior to palpable glandular involvement.

d. Desmoplastic Tumors; These arise from adult cells and reproduce cells of adult type. This group includes carcinoma simplex, fibro carcinoma and squamous carcinoma. These tumors while more refractory to radiation are nevertheless a satisfactory class to deal with because of their slower growth allowing more time for reactive inflammation to limit their extension, their generally less invasive tendencies and when the regional lymph glands are involved usually one or two show changes a good while before others of the chain.

e. Adeno carcinoma; representing cases in which there is less atypical character to the cells as where carcinoma slowly supervenes on an adenoma of the breast, uterus, etc.

The poor results from radiation therapy alone in these cases is in keeping with the general proposition that the more adult the type of cell and the less the arrangement of stroma and cell departs from the normal, the more refractory the tumor to radiation.

f. Fibroblastic sarcoma: In this group the most that can be expected is a slowing of the growth and the conversion into a less malignant neoplasm. Osteo sarcoma is representative of this type.

In conclusion, I would remind you that while we are waging a better war on cancer than formerly and are approaching it from other angles the ancient enemy still shows his teeth and remains unconquered. We should, therefore, be on the *qui vive* and attack before he has entrenched himself. This means get the cases early and not overlook precancerous lesions. This is the gospel that the general practitioner must preach to his patients.



## UROLOGY IN ITS RELATION TO OTHER SPECIAL BRANCHES OF MEDICINE AND SURGERY, OR THE OPPORTUNITIES OF AN UROLOGIST AS A CON- SULANT

*By Marion H. Wyman, M. D., Columbia,  
S. C.*

Uro is a prefix meaning of or pertaining to the urine. Strictly speaking urology is that special branch of medicine relating only to the urine or urinary organs. However, in the male, on account of some organs as the prostate and male urethra, being common to both the urinary and genital tracts, the word urology is accepted by us to include the entire male uro-genital system. On the other hand, the female reproductive organs are not actually or even understood to be connected with the urinary tract as a specialty. Gynecology is the term used to refer to the female genital organs as a special branch. Nevertheless at Johns Hopkins Hospital urology is distinctly and separately associated with the genital organs in both the male and the female. Drs. Kelly and Hunner, gynecologists, have written as much on the urinary diseases as on gynecological subjects, and Dr. Hugh Young, urologist, has attained his greatest fame on account of his work on the prostate. Thus at Hopkins the gynecological and the genital departments both diagnose and operate their respective urological cases. At another large medical center, The Mayo Clinic, urology is distinctly and only a diagnostic and consulting specialty. There, except in the purely medical cases, the urologist ceases to treat his patient after the diagnosis is made. Most individual urologists, should like Keyes of New York City, not only diagnose, but operate, their own patients. A few doctors following this specialty reach out and extend their fields of activity beyond the actual confines of the

genito-urinary system. The writer personally has seen well known urologists of France and even Dr. Edward Keyes, Jr., of New York City, perform uncomplicated inguinal herniotomies. Their excuse would, no doubt, be that the vas-deferens which is a genital organ, passes through the inguinal canal.

All urologists include venereal diseases, especially in the male, as properly coming within their special practice, while gonorrhea in the female is usually treated by the gynecologist. An interesting question suggests itself right here:—The question being; is syphilis a venereal disease, who should treat it? All physicians should be able to recognize, and treat this disease which manifests itself—first, usually as a genital sore; but in the second stage the dermatologist can properly claim a preference, and in the third and last stage all practitioners, both physicians, and surgeons including the internist and neurologist can advance good reasons why they should be allowed to handle these cases. However, we contend that syphilis is practically always a venereal disease in the primary stage, it is usually transmitted like other venereal diseases; and that the all important point is to recognize the initial sore or lesion before the secondary stage is reached for it is in the initial stage that we can most quickly and certainly cure our patient. Therefore, from a prophylactic, and an early diagnosis and treatment view point the genito-urinary man has the first claim.

Before taking up in some detail the urologist's relationship to the internist and surgeon, these being the two with whom he most frequently consults, it may be interesting to note briefly how often the urologist has conditions in common with the other special branches. For example: Obstetricians need help with pyelitis complicating pregnancy; gynecologists have so many urinary complications until occasionally they, as shown by Kelly and Hunner, become urologists themselves; at times orthopedists request reports about urethral and prostatic

infections in reference to arthritis; neurologists, with spinal cord lesions affecting the urinary bladder, use urological assistance; even eye, ear, nose and throat men and pathologists have G. U. consultations and finally how often do our good friends the X-Ray men call on us to outline the urinary tract with opaque catheters and solutions to show whether or not suspicious shadows are in the urinary organs. Although the writer has an X-Ray outfit in his cystoscopic room at his office and finds it an essential adjunct, he does not feel that it is an advantage or even wise for him to do his own X-Ray work. He has good X-Ray specialists available who come to the office when needed. The urologist should always interpret the X-Ray plates of his patients in conjunction with his X-Ray consultant.

Consultations with the internist and general practitioner are very satisfactory. They are primarily interested in making a diagnosis and seem to have a sympathetic understanding with their urological diagnostic brethren. It would appear to be proper to let the internist be the chief of each group of special workers. Each worker should make his separate examination, report in writing his findings with his interpretation of same, draw his conclusions and make any necessary recommendations to the internist. The internist could correlate all the different reports and draw very definite conclusions about the person examined. An individual worker, say the urologist, wanting special reports, for example, from the X-Ray consultant, he would, of course, get these reports before interpreting his own findings.

The following case shows how dependent special workers are on each other for help. An internist referred a very weak, and thin negro man, reporting that he had been unable to explain the patient's condition by a general examination. In fact, all examinations including chest, sputum, blood, urine, etc., were negative. A slightly suspicious fullness was noted in right costo-vertebral angle. However, there was no pulsation and

very little fluctuation in this area. Ureteral catheterization showed urine and function from both kidneys to be normal. This patient did not have an elevation of temperature, nevertheless, since the urological organs were under suspicion it was up to the urologist to clear his specialty. On aspirating the costo-vertebral angle, a syringe full of pure blood was evacuated. The internist decided to aspirate for himself, and he also obtained pure blood. The X-Ray showed nothing definite. The patient was found dead in bed a morning or two later. An autopsy revealed an aneurism of an immense size of the abdominal aorta. The internist thought of and discussed aneurism but on account of no pulsation did not make a positive ante-mortem diagnosis, and only the autopsy convinced him that the urinary tract was not involved.

General surgery was comparatively old, fairly firmly established and well understood long before special urological diagnostic methods had reached their present state of efficiency. Ten years ago was the first time that our good state of South Carolina could claim that she had a physician confining his entire time and practice to urology. Yet, today, surgeons everywhere in our state use urological consultations constantly, and find urological aid indispensable in making scientific diagnoses.

In view of the fact that the greatest difficulty in surgical diagnosis, arises in that part of the human anatomy bounded above by the diaphragm and below by the pelvic bone, known as the abdominal cavity, and remembering also that the urinary and genital organs occupy spaces practically the entire length of this diagnostic jungle, these organs under discussion must necessarily always be excluded before any positive diagnostic conclusions can be reached.

It must be admitted that it was primarily the need felt by the general surgeons for help in urological diagnosis that caused not only the development of diagnostic urological instruments, but also caused most of us doing this special work to take up this

branch. The writer is particularly mindful of this fact and grateful to the general surgeon who caused him to confine his practice to this work. However, now that urology is firmly established and recognized as a distinct specialty and since it holds such an important place in differential diagnosis, there seems to be a tendency on the part of some urologists to almost be willing to "strike" against the general surgeon who continues to operate on urological cases, for the general surgeon must do these operations under the direction of his urological consultant. You may argue that other consultants such as the X-Ray men hold the same relationship, however, on careful consideration you will see that in urological cases the urologist really holds the general surgeon at his mercy with reference to a diagnosis and treatment. Urologists are surgeons, but all surgeons are not urologists.

Surgeons have always, and properly so, prided themselves as being not mere operators or just technicians, but they argue that a real surgeon uses a peculiar faculty called "surgical judgment," which diagnoses the ailment, and determines just where, when, and how the knife should be applied. The good surgeon has learned that many rush-in and stay too long, where others fear to enter. The urologist is now expected not only to diagnose urological trouble but he must also indicate what and how much should be done in the way of an operation. His responsibility is great and very exacting and his decisions are constantly being proven to be correct or not upon the operating table.

Just recently a case was seen, in consultation that emphasizes the point under discussion. This patient had a palpable tumefaction in the left upper abdomen. Urine was practically normal, there was a subnormal temperature and leukopenia; now on account of the lowered white blood count together with a mass which could have been the spleen, this patient may have had malaria. X-Ray of the urinary tract was negative for stone. A cystoscopic examination

with bilateral ureteral catheterization disclosed a left pyonephrosis with a blocked ureter, the other kidney's function was low. The urologist here made a positive diagnosis, and also recommended a two stage operation. The pus kidney was drained under local anesthesia and after two weeks the patient's general health and other kidney's function had improved to such a marked degree that the diseased organ could safely be removed under a general anesthetic. Had the surgeon in this case been able to have diagnosed the pyonephrosis he would have still needed the additional information that the other kidney was below normal in function.

Hypernephroma which is frequently manifested by profuse haematuria without pain or symptoms to suggest the location of the bleeding also emphasizes this point. A complete urological examination including the use of the cystoscope is the only method to locate the source of the bleeding and to determine the condition and function of the other kidney. A man in our State Penitentiary at this time has a malignancy in one kidney with an infection and very low function of the other. The Surgeon with this information furnished by the Urologist, has been saved the embarrassment of having his patient die following an easy nephrectomy.

Another case is interesting—A young white man, a barber, age 27, consulted Dr. J. S. Fouche for "stomach trouble" chiming that he had suffered for three years, and had been diagnosed gastric ulcer. His description of the character and time of the pain together with the fact that he received some relief from water or food was very suggestive of ulcer. His past history was unimportant. He had never experienced any urinary symptoms. General physical examination was practically negative. There was some tenderness in the epigastrium and very slight tenderness in left costo-vertebral angle. Tonsils were large and infected. Patient's general appearance showed a pale, poorly nourished and anxious man. Laboratory examination revealed a urine cloudy with pus and red blood cells. Feces were



negative for ova and blood. Blood Wassermann negative. Leucocytecount slightly increased. A plain X-Ray of urinary tract disclosed the left kidney's pelvis well filled with an opaque substance. The remainder of the urinary tract was negative. The X-Ray man did not want to believe that the pelvis was so regularly outlined with multiple calculi, but insisted that it must be filled with an opaque solution as if in preparation for a pyelogram. The combined kidney function, as determined by phthalein, was 40%. A cystoscopic examination revealed left ureteral orifice congested. Both ureters catheterized, urine from left kidney showed much pus and no function to phthalein. Urine from right kidney was practically normal with a 40% phthalein. Thus you note the right kidney was doing all the work as disclosed by the phthalein test. On account of the positive diagnosis of infected renal calculi of the left kidney, and infected tonsils we did not have gastric contents examined. A general surgeon removed this man's kidney in a one stage operation and the patient had an uneventful recovery. The surgeon saw this patient, possibly, for the first time on the operating table. Of course, he had the opinions of the men who worked out the diagnosis. When this man was discharged from the hospital with one kidney gone he needed more help and advice. The urologist is prepared to give this special advice which means so much to the future well-being of these kidney patients. We had this patient's tonsils removed and other infected foci cleaned up and he is in perfect health today, five years after his operation.

Important questions arise in these renal calculi cases:—First, the mere presence of a calculus in the kidney does not necessarily mean that the calculus should be removed. There is a peculiar but definite "stone bearing" period in some individuals. Dr. Geraghty recognized this fact and recommends that no surgical interference be attempted until all contributing causes to stone formation have been "cleaned up". These

causative factors are focal infections and obstructions in the urinary tract. At times just a pyelotomy with drainage should be attempted in one stage and the calculus removed later. A patient named Livingston, calls attention to another interesting point, this being:—Whose duty is it to make a diagnosis of peri-nephritic abscess? This case was negative to X-Ray and ureteral catheterization. The urine from both kidneys being entirely normal on two cystoscopic examinations. The patient was very sick with a high leucocyte count and fever. The urologist declared the urinary tract to be negative; the internist reported the chest normal and thought that the symptoms were those of a kidney or peri-nephritic involvement, still the surgeon was unable to aspirate pus out of the peri-nephritic space. On account of the patient's being so sick an exploratory operation was decided upon. Then the question arose whether to go in anteriorly or posteriorly. The surgeon first thought of a posterior incision over the kidney, but finally on re-examination under a general anesthetic he decided to go in anteriorly. This case had been very annoying and trying because it looked like a kidney situation, especially after the surgeon failed to find pus on aspirating the peri-nephritic space. The condition turned out to be a peri-nephritic abscess situated high above the kidney. The anterior incision was avoided because a final aspiration by the urologist on the operating table disclosed the location of the pus.

One final case, a negro man, had been in Government hospitals for several years and came to Columbia with symptoms of intense cystitis and was very much under weight and very weak. Chest, sputum, and urine were all positive for tubercular bacilli. There were no signs or symptoms to suggest which kidney or if both were involved. The total kidney function was about one-half normal. He had been cystoscoped many times, including several attempts by the writer, but without success in catheterizing the ureters. The bladder was intolerant to

fluid and intensely inflamed. Finally a cystotomy to insure free drainage was done to rest the bladder. After resting the bladder for a week we succeeded in catheterizing the ureters and found the left kidney to be the one principally involved, and determined the right had sufficient function to risk removing the left. Just at this point the Government decided to transfer this man to another hospital and to another surgeon for operation. The patient objected to being moved and lose the benefit of our diagnosis which had required so much time, and work, to say nothing of the pain he had suffered. We removed the diseased kidney claiming it was an emergency. He was re-examined recently four years after the operation, this man now weighs more and is in better health than ever in his life. The operation of nephrectomy was easy, but the diagnosis and preliminary work was awful to both patient and to the physician.

In conclusion it is well to stress the importance of knowing the condition of both kidneys before attempting any kidney surgery. For it is a well known fact that not only have wrong kidneys been removed through imperfect diagnostic methods, but that many lives have been lost on account of attempting too formidable operative procedures in one stage. Urologists ask to be recognized as doing very exact and indispensable diagnostic work, and also that due recognition and credit be placed on our services in the general management of urological cases when others operate. In prostatic surgery for example, the main emphasis has been on the pre-operative preparation, the urologist's part, rather than on the actual enucleation of the hypertrophied gland tissue, the surgeon's part. Urologists deserve the credit for decreasing the mortality rate in all operations on the urinary tract. We do not ask that the urologist be the only one to operate on genito-urinary conditions, although we feel that after he has done the diagnostic work that he is peculiarly well fitted to do any urological operation.

#### DISCUSSION:

DR. ROBERT WILSON, JR., (Charleston):

One point I would like to endorse and emphasize, and that is the importance of the internist being responsible for the diagnosis in a case which is under his care. I think very often we have been inclined to "pass the buck" so to speak. Personally, I feel responsible for every patient who commits himself to my care. Some of the most gratifying work I have done has been with men in other lines—we go over the case very carefully and come to a conclusion, but the internist must feel a responsibility for the patient.

Another point which the Doctor made and which I think is important is the focal infections and their influence upon the urological and general surgical situation. We frequently find that the condition for which operation is done depends upon a focus of infection elsewhere—teeth, tonsils or sinuses—and the cleaning up of that situation has been overlooked. In those cases there is danger of recurrence.

It is always important for us to make a very thorough examination of the patient, and in case of the discovery of foci of infection remove them as well as take care of the conditions which are immediately pressing for relief.

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DR. GEORGE BUNCH, (Columbia):

We consider the urologists our best friends and we cooperate with them and they help us out in diagnosis. As to the urologist actually doing the surgery, urological surgery is oftentimes major surgery. The renal artery comes from the aorta, and in a nephrectomy a man must know something about major surgery. If the urologist will, learn something about general surgery before attempting this major operation I am sure it would be to everyone's advantage. A man must have a good deal of experience before he attempts these surgical procedure.

---

DR. F. D. RODGERS, (Columbia):

I believe that the internist is the boss doctor of the lot. He comes before every other man. I believe the specialist should not see a patient except when referred by the internist. In this connection I would like to say that just yesterday I saw a patient who had been referred to a urologist for pyuria. The urologist had done everything—he made his own X-Ray plates, did his own laboratory work. He is an excellent urologist and had done some very fine work. In addition to pyuria he found some shadows in the urinary

tract that he thought were gall stones. He told this woman she should go to a surgeon and have the stones removed and she would be all right; but the woman did not get better and some time later she consulted an internist. The internist went over the report of the urologist and several other specialists who had examined the patient, then he asked for an X-Ray of the chest and found she had tuberculosis involving the whole right lung and the left apex. The urologist had done excellent work, but what that woman needed was an internist to direct the work. I do believe that the urologist, the X-Ray man, the eye, ear, nose and throat man, and every other man who sees the patient should see the patient in consultation with either a good general practitioner or an internist—somebody to take the responsibility for the whole patient and not the urinary tract, the eye, ear, nose and throat, the heart or what not. There should be an internist in active charge

of the patient so as to correlate the findings and give the patient the result of this work.

DR. M. H. WYMAN, (Closing):

I am sure Doctor Bunch and Doctor Rogers are correct. I brought this up to try to get sympathetic cooperation between the men. If you know a man and believe in him, take his report and go ahead. I did not intend to get up any controversy between the medical men and the surgeon. But you must remember that urology is only ten years old in our State. The men are younger than the general surgeon. We would like to do a little surgery if we are able to do it, but before a man can do a nephrectomy he is supposed to be familiar enough with general surgery to be able to do it. Preparation is the all-important thing. We have no fight with anybody—I just wanted to encourage closer cooperation for the good of our patients.

#### INSTRUCTION OF MIDWIVES BY A COUNTY NURSE AS CONDUCTED BY THE DILLON COUNTY HEALTH DEPARTMENT, SOUTH CAROLINA.

By R. G. Beachley, M. D.

With the organization of the county health unit early in 1923, and a subsequent survey of the women practicing midwifery in the county. A pressing need was seen for some form of supervision, and instruction.

In a comparatively small county of not more than twenty-five thousand population, there were in the summer of 1923, seventy women, mostly negroes, practicing the delivery of children. The majority of these children could not read or write, and their ignorance on matters pertaining to the duties of a midwife, was appalling.

Practically no instruction had ever been given them, and with their ignorance, and crude methods they were more of an liability than an asset to the community.

A few cooperated with the doctors in their work.

The large majority used their own judgment in the delivery of their cases, which undoubtedly increased the maternal mortality, and morbidity in the county.

One of the first undertakings of the newly formed health department was to bring these women direct control of the county nurse. The first step was to secure the names and addresses of all the women practicing midwifery in the county.

Arrangements were made to hold a series of classes in different parts of the county, by the county nurse, where these women might attend and receive instruction.

In addition to giving instruction at these classes it was desired to eliminate those who where unfit to practice midwifery, and limit the work to the best, scattered stragically in various parts of the county.

The ones granted certificates were given all the training possible by the county nurse.

The course of instruction consisted of a series of ten lectures held in different parts of the county. The classes were usually held in the colored schools, as the majority of the midwives are colored women.

The few white midwives were given instruction at the health department.

At the close of each class the women are allowed to ask questions. Answers are given as clearly as possible not using technical, or medical terms which would be confusing.

A mannikin was used demonstrating the handling and care of the baby.

Each midwife was required at the end of the series of classes to present her obstetrical bag, for inspection by the nurse.

Following the series of classes the nurse selects only those who in her judgment are fit to practice midwifery. They are given certificates issued by the state board of health, and instructed to report to health department once every month for instruction and supplies. A record is kept on an individual card of the visits of each midwife to the health department.

Any midwife failing to comply with the regulations is subject to the withdrawal of her permit.



## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

We are accustomed to look upon bacteria as the cause of disease. With the name of a disease promptly flashes in our minds the name of the causative germs. It is of interest to call attention to another cause that occupies a fairly prominent field.

To what extent the eye may be subject to localized anaphylactic phenomena and what part ocular tissues may play in such reaction:

1. The ocular tissues are affected through general sensitization or more so by ocular sensitization.

2. Correlation between such sensitization as may occur in life and the ocular diseases, or the relationship between ocular diseases and the science of immunology.

1. Conjunctiva. The conjunctivitis that appear to be related to immune reactions are the conjunctivitis that occur in relation to Hay Fever, Pollen and Food sensitiveness and phlyctenular diseases. Vernal conjunctivitis was studied in its various degrees of manifestation in 19 cases, 13 were improved by treatment with the pollen to which they were sensitive, thus indicating that Vernal Conjunctivitis is an allergic phenomena dependent upon pollen and food protein sensitivity, which sensitivity was claimed in a paper read before the Southern Medical Association in 1922.

2. Phlyctenular Kerato-Conjunctivitis—due to (a) vague irritability caused by faulty carbohydrate metabolism, (b) ethmoid disease, (c) through an allergic reaction related to tuberculous infection—an antibody—antigen phenomenon or reaction.

Evidence in favor of:—1. In some T. B. cases phlyctenules may be produced by instillation of tuberculin in the conjunctival sac. 2. In patients hypersensitive to tuberculin its instillation in conjunctival sac has

caused phlyctenules as a part of positive tuberculin reaction.

Why do phlyctenules develop in eyes of T. B. cases? Theory:—At some time there has been a minute T. B. focus in eye sensitizing it. The liberation of fresh T. B. material in such cases cause the development of the phlyctenules, such a reaction had been proved experimentally.

A similar allergic reaction may be ascribed in ethmoid disease and to absorption of metabolic products, but in these it is not easily proved.

An Anaphylactic Keratitis like an Interstitial Keratitis may also occur as in case report due to corn pollen. This may in part explain the occurrence of Interstitial Keratitis in the second eye in a case under anti-syphilitic treatment for the first eye. The theory has therefore advanced that Interstitial Keratitis develops from the absorption of syphilitic virus in the previous sensitized cornea. The same may be predicated about tuberculin Interstitial Keratides.

3. Crystalline Lens. The lens protein is organ specific and not species specific. Lens defect can be produced in the offspring of pregnant animals that have been sensitized with lens protein. Analogous to this is the endophthalmitis phacoanaphylactica first demonstrated by Verhoeff and Lemoine, that occurs as a result of absorbing lens after cataract extractions or in traumatic cataracts.

4. Uveal Tract. Presents sympathetic ophthalmia as the principal disease due to immunological phenomena. From this we learn that normal healing of wounds involving the uveal tract is associated with the development of immunity against pigment. (When such does exist it can be produced). On the other hand sympathetic op-

themia is associated with a definite cellular hypersensitiveness to pigment.

Just as certain types of Arthritis may be allergic phenomena, so certain forms of uveal disease seem to have an allergic causation.

Having given the allergic causation Dr. Woods then briefly gives the diagnostic methods:—(1) Pollen sensitivity determining not the group, but the definite pollen at fault, that it may be used in desensitizing the patient, (2) Tuberculin Hypersensitivity is tested by the intracutaneous test

by starting with 1-100,000 increasing to 1-100, (3) Wassermann—negative blood reaction means nothing in cases of optic neuropathy, (4) Lens protein—pigs lenses in powder for cutaneous tests is used as 10% by weight in normal saline for intradernal injection.

Comment: Proof is not present for some of the statements in this article of Dr. Woods', but this is the important fact—we are coming to realize the enormous role that allergy occupies in the progress of disease.

## SOCIETY REPORTS

### COLUMBIA MEDICAL SOCIETY IN MEMORIAM

*Clarendon W. Barron, M. D.*

Whereas in the Providence of Almighty God we have been called upon to mourn the death of a beloved member of the Columbia Medical Society.

Resolved:

That in the death of Dr. Clarendon W. Barron our Medical Society has sustained a great loss.

Resolved:

That he, in his daily life, spread sunshine and joy to the old and the young. His friends were from all walks of life. The rich and the poor both alike could approach

him with the same ease and confidence. Children waved to him as he passed them on the streets. On hunting and fishing trips he made everyone feel the spirit of the sport. He stood in the front rank of the physicians of Columbia and of the State of South Carolina. He was especially loved by the young physician just beginning his professional struggle.

Resolved:

That we tender to the bereaved Wife, His Brothers and Sisters our sympathy: and that a page in our minute book be dedicated to his memory.

F. M. Durham, M. D.

Geo. H. Bunch, M. D.

Henry W. Rice, M. D.

Committee Representing the Columbia Medical Society.

## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

Leaving out of all consideration a few fanatics and those who are hopelessly ignorant of all medical science, it is generally admitted that in the past few decades there has been much real progress in medicine all along the line. Marked advance particularly in certain specialties as roentgenology, bio-chemistry and urology is clearly evident, while in the domain of therapeutics because of certain inherent difficulties apparently less has been accomplished. Perhaps the most valuable contribution have been made in preventive medicine. Especially is this true if visioned from the economic standpoint. We today can protect individuals more or less permanently from diseases against which formerly we were helpless. For the age-long dream of a therapsia magna has been slow of fulfillment, and we are more convinced than ever that prophylaxis is better than cure. Indeed there are but very few maladies that we can cure, though assuredly we can render aid or ameliorate the morbid condition many times. In an excellent article entitled "Reflections on Congenital Syphilis" (Amer. Jour. Dis. Child. 1924, 28:2, Aug.) Leonard Findlay after reviewing his experiences concludes that the only hope for the eradication of syphilis lies in its prophylaxis. He is satisfied that antenatal treatment is of great value. Veeder (ibid. p. 249) states, after checking up 434 cases of congenital syphilis which had been treated in his clinic, that treatment as a whole has been unsatisfactory, and that the only effective treatment has been preventive. Such being the case it would seem imperative that all pregnant women who have syphilis be treated as efficiently as possible, for the sake of the unborn baby.

Henry F. Helmholz writing on "Preven-

tive Medicine and the Future of Medical Practice" (J. A. M. A. 83:7, Aug 16) asserts that "In no sphere of medicine does prevention play so large a part as in pediatrics? Vaccination which is so old a story that it is a hackneyed theme has saved the lives of thousands of individuals. Yet today a large number of people are not protected against small-pox until they enter the public school, even though this once dreaded disease is markedly on the increase and is steadily gaining in virulence. Physicians should urge parents to have their children vaccinated during the first year of life. It would be of interest to learn what percentage of doctors in getting a history ask whether the child has been vaccinated; and then if given a negative answer explain its importance.

Our near conquest of diphtheria by the injection of antitoxic serum is not entirely satisfactory, for the mortality still hangs around 10%, but with the use of the toxin-antitoxin mixture the disease can be prevented in 97% of individuals. Some schools are requiring of all pupils on entrance a certificate of immunity as shown by the Schick test or that they shall have been immunized. But this does not solve the problem, for diphtheria is largely a disease of the pre-school age. The procedure of administering the toxin-antitoxin is harmless, and the benefit great. Further in the very young the local reaction is less than in late childhood.

We doctors owe it to our patients that, in addition to obtaining the list of diseases the child has had, or the story of what foods the infant has been successfully or disastrously reared on; the matter of diphtheria prevention (and in the near future scarlet fever too) should be stressed. All mothers,



or fathers if at hand, should be made to realize that they must assume the responsibility should they fail to protect their offspring against diphtheria. No baby unless too ill should be permitted to reach its first birthday without having been immunized. Where the doctor fails to advise that steps be taken to prevent small-pox or diphtheria, should infection occur, he might be held as not having fulfilled his whole duty. For

when one attends children, whether he calls himself a pediatrician or a general practitioner he necessarily should practice some preventive medicine. The prevention of the nutritional disorders, of postural defects, and of cardiac disease are but other phases of some of the many that come properly under the domain of one who not only drugs, but cares for the child.

## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

EISENDRATH, DANIEL N.: CONGENITAL STRICTURES OF THE URETER. THE SURGICAL CLINICS OF NORTH AMERICA, JUNE 1924, P. 635.

Eisendrath states that we now realize the importance of ureteral strictures in the production of changes in the kidney and also in causing reflex symptoms especially to the bladder. He states that "the subject of ureteral stricture is perhaps the most actively debated one in the field of urinary surgery." They may be either congenital or acquired; the congenital ones being the result of defective development.

The writer classifies congenital affections of the ureter as follows:

1. Strictures.
2. Twists.
3. Valves.
4. Diverticula.
5. Dilatations without obstruction in the ureter, bladder, or urethra.

He thinks that the congenital strictures are in all probability due to imperfect canalization of the solid epithelial outgrowth from the wolffian duct, which represents the ureter in the embryo. By the fourth month, when the first urine passes through the ureter, canalization should be complete. It is not difficult to visualize the effect of

a failure of one or more segments to be canalized. In this manner a narrowing or complete absence of the lumen can be readily understood. There are three points at which the ureter is normally narrowed than the remaining portion.

He states that congenital strictures are found after birth at one of the following locations or combinations.

(a) Close to the renal pelvis or to the bladder on one side of the body, at the levels where narrowings of the normal ureter occur most constantly.

(b) At one of the levels referred to in (a), but on both sides of the body. All possible combinations have been reported.

(c) Bilateral stricture at about the same level. These are most common at or close to the vesical end of the ureter, often giving rise to a condition known as cystic dilatation of the ureter.

(d) Stricture at the vesical end of one or both of the ureters of a double kidney usually with a blind ending and protrusion at the normal location of the ureteral orifice or elsewhere in the bladder, usually close to the internal meatus.

Twists or torsion of the ureter usually occur in the middle or upper thirds of the ureter. It may be present in a normal person to a slight degree, and give rise to

clinical symptoms when the lumen is more or less completely occluded.

Valves are found in about 20 per cent of all individuals and occur at any level. They seldom if ever give rise to any obstruction.

Diverticula may occur either singular or multiple and play an important role clinically if the seat of an infection or point of lodgment of a calculus.

Idiopathic dilatations of the ureter not infrequently occur.

The writer is of the opinion that a study of the pyelitis of children with the aid of uretero-pyelography is warmly urged in order to avoid overlooking a possible congenital stricture as the factor which favors the persistence of the infection. The clinical pictures do not differ from those of

ureteral stricture of acquired origin, namely, pain the predominant symptom; fever and other signs of renal infection; abdominal tumor; intravesical protrusion of the lower end of the ureter (cystic dilatation). The treatment of these strictures does not differ from that of the acquired type, with the exception of the cystic dilatation. The protrusion should be opened with the aid of the high-frequency current; open surgical procedures are contraindicated and unnecessary. In one of his cases the protrusion from cystic dilatation completely filled the lumen of the bladder giving rise to urinary retention. In another case the prolapse extended through the urethra appearing at the vulva. The diagnosis of cystic dilatation in general depends upon the cystoscopic examination.



## NEWS ITEMS



### REQUIRE EQUALLY HIGH QUALIFICATIONS OF ALL WHO PRACTICE MEDICINE

Statistics published this week show that the medical schools of the United States are training physicians in accordance with the present-day extensive knowledge of medicine. The turning out of well trained physicians is only one factor, however, in securing for the public the benefits of modern scientific medicine: adequate legal restrictions must be provided against ignorant or inadequately trained doctors. Such legal restrictions, indeed, have now been established in all but eight states<sup>1</sup> for those generally regarded as "physicians," since medical practice laws in most states have established for physicians the educational standards adopted by our better medical schools. Unfortunately, however, under various pretexts and by persistent hammering at legislatures, cultists of various types have obtained legal authority to treat the

sick on qualifications lower than those required of physicians. These irregular practitioners assume a personal responsibility for the care of the sick and act as substitutes for the physician; and, since they do not have the physician's qualifications either educationally or professionally, they practice under false pretenses, and are a menace to the health and lives of their patients. As medical science has advanced during the last few decades, this menace has been constantly increasing. Delicate and highly technical procedures are being employed in the treatment of disease which, in the hands of unskilled or ignorant practitioners, are exceedingly dangerous to the patient. Modern medicine also has brought out a specific treatment for each of several diseases, and a failure to use this treatment may result in disaster to the patient. It is time that the dangers from untrained or incompetent practitioners should be generally recognized and that medical laws should be strengthened to safeguard the public against them. The legal

phases of this problem have been clearly presented<sup>2</sup> by Harry Eugene Kelly of the Chicago bar, who supports his statements with an array of court decisions that greatly add to their force. In the eyes of the law, according to Kelly, the word "physician" includes every one who assumes the responsibility for the care of the sick and the injured; furthermore, the educational and professional qualifications required of physicians should apply with equal force to all who are granted legal authority to practice the healing art. The training given in medical schools has not yet reached perfection, but medical students are now being given a far better knowledge of the causes and treatment of diseases than was possible twenty or more years ago. The greatest problem of today is how to secure for the entire public the widest possible benefits of modern scientific medicine. An important step toward the solution of this problem would be the adoption in all states of laws requiring reasonable educational qualifica-

tions of all who are to practice medicine.

—*Jour. A. M. A.*, Aug. 16, 1924.

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## The Baker Sanatorium

Colonial Lake

Charleston, S. C.

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# The Journal

## OF THE

### South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

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## EDITORIAL

### THE STATE MEDICAL ASSOCIATION AND THE MEDICAL COLLEGE

The South Carolina Medical Association owes a tremendous debt of gratitude to the Medical College of the State of South Carolina for loyal support of all of its enterprises for three quarters of a century. Indeed in all the trying days of the Association's history the members of the faculty of the Medical College have rallied strongly to the aid of the Association.

The high scientific attainments of the faculty and their frequent contributions to the Association have had a profound influence in placing the State Medical Association on the high plane it now enjoys in the esteem of scientific circles throughout the world.

The Journal is keenly interested in the success of the celebration of the one hundredth anniversary of this splendid institution.

We urge every member of the Association who possibly can do so to be present. We should make an extra effort to show our appreciation of the great record made by the college in the past century of its existence. Not the least attraction will be the opportunity to profit by the splendid two day post graduate program outlined elsewhere. More than half the profession of this State graduated from the Medical College of the State of South Carolina and the remarkable growth of the Alumni Association under the presidency of Dr. D. M. Crosson who is also President of the State Medical Association assures a large attendance by the former graduates.

## VOTE FOR THE BOND ISSUE

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The medical profession of South Carolina will as usual we believe lend its influence toward the enlarged educational program involved in the ten million dollar bond issue to be voted on in November.

The Medical College is especially to be considered as in urgent need of funds for its enlargement. The applications for entrance far exceed the facilities and therefore the future supply of doctors is imperiled.

---

## GREAT CELEBRATION ONE HUNDREDTH ANNIVERSARY MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA

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The Medical College of the State of South Carolina will celebrate, in a fitting manner, its 100th anniversary on November 12th and 13th. Plans are under way to make this one of the great occasions in its history, and it is expected that there will be a large gathering of physicians of the State, along with the alumni of the Medical, Pharmacy and Nursing Departments.

The program will include a beautiful tableau illustrating the phases of medical advancement, clinics by the Staff at the Roper Hospital on medical, surgical and pediatric subjects, a reception at the Charleston Museum, at which will be shown the "Old Apothecary Shop," the oldest in America, class reunion luncheons, terminating in a banquet at the Francis Marion Hotel. At this latter there will be representatives from all of the State Colleges and several distinguished medical educators, who will give short speeches. All of the details have not been worked out, but the program promises to be of distinct educational value, besides affording considerable interest and enjoyment.

## TENTATIVE PROGRAM for CENTENNIAL CELEBRATION of THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA

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NOVEMBER 12, 1924.  
8:30 P. M.

Tableau illustrating phases of medical advancement, at Charleston High School Auditorium.

The College's guests and the public generally are invited.

NOVEMBER 13, 1924.

9:00 A. M. to 1:30 P. M.—Clinics at Roper Hospital.

12:00 M.—Unveiling tablet in honor of Dr. F. L. Parker.

2:00 P. M.—Class Reunion Luncheons.

4:00 P. M.—Reception at Charleston Museum, Exhibiting "Old Apothecary Shop."

7:00 P. M.—Banquet Francis Marion Hotel  
Given by Alumni to guests.

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## HISTORY OF THE ROPER HOSPITAL

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The Roper Hospital, a property valued at nearly \$500,000, on Calhoun and Lucas streets, is one of Charleston's really great institutions, and has in the past few years expanded impressively. It stands as a monument to the benevolence of her citizens and especially to Thos. Roper, whose far seeing vision made its existence possible. It is also a testimonial of the devotion and practical idealism of the medical profession of Charleston. For the past eighteen years this institution has cared for the maimed, the sick and the injured poor of Charleston, and it has rendered a service of incalculable benefit to the community. It has afforded the best and most improved methods of medical and surgical treatment to the afflicted poor of this city. In addition to rendering service to the needy citizens in the hospital, at their homes and in the Shirras Dispensary (which is the out-patient department of the hospital) treatment has been afforded persons with limited means in its private departments. It has furnished isolation and care of contagious diseases, and by so doing has been a factor





**ROPER HOSPITAL**

Where Clinics will be held at the MEDICAL COLLEGE CENTENNIAL CELEBRATION, on November 13, 1924.

in reducing the mortality of many of these diseases.

Aside from caring for the sick and injured, the hospital is one of the great educational institutions of the city and of the State. It would not be far wrong to say that it has been a great factor in the spread of medical knowledge in the South Atlantic States, for as a great teaching institution in connection with the Medical College of South Carolina, the graduates in the medical and nursing professions have received their training and gone forth to practice their professions, locating in most instances in this section, though graduates of these institutions are scattered all over the United States.

The history of the development of the present hospital is closely interwoven with the history of Charleston, and is one which bears testimony to the fine public spirit of its citizenship. The present hospital building was erected in 1905 by the Medical College Society of South Carolina, as trustees for the Roper fund. Thomas Roper, for whom the hospital is named, bequeathed thirty thousand (\$30,000) dollars in trust to the Medical Society of South Carolina, to receive and reinvest it until a sufficient amount had accumulated, or aid received from public and private benefaction to erect and sustain a hospital. The present plant, however, is the outgrowth of the old Roper Hospital which was situated on Queen Street, adjoining the old Medical College building. This hospital was commenced in 1850 and finished the latter part of 1852. Owing to an epidemic of yellow fever which broke out after the erection of this hospital (and it became necessary to use the hospital to care for these afflicted persons) the old Roper Hospital did not open until 1854. Under contract with city council the hospital was run until the Civil War, taking care of the sick poor and temporary insane persons to the satisfaction of the community. During the war the hospital was thrown open for the treatment for the wounded and sick soldiers, but during the bombardment of Charleston it became necessary to remove the sick to the upper wards of the city, as the building became unsafe on account of shell fire. When the city was occupied the hospital was taken over by the federal authorities, and at the close of the war, returned to the trustees, the federal authorities paying the trustees \$2,300.00 for rental. On account of the poverty of the community at the close of the war, city council was no

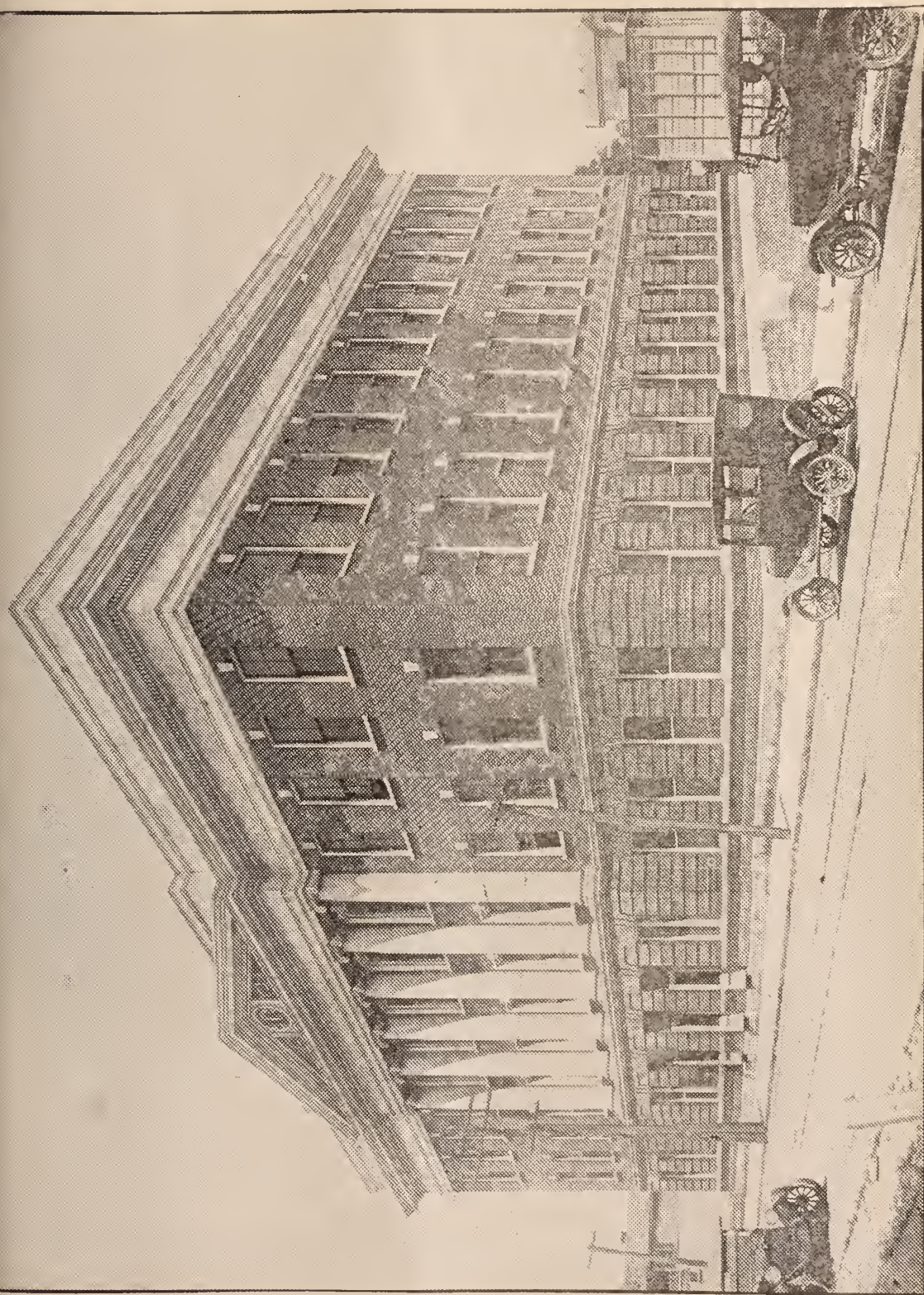
longer able to maintain the hospital, but the trustees managed to carry on on a contracted scale until 1871, when it was given up as a useless struggle and was never operated again under the auspices of the Medical Society, though its wards are used by the city at a minimum rental. By carefully preserving and investing the funds remaining and by receiving donations from various private sources, the trustees of the Roper fund had accumulated more than \$150,000 by the commencement of the present century. This sum being deemed sufficient, the Medical Society appealed to city council to permit the erection of a modern hospital and to agree to sustain it. In 1905 a definite agreement was entered into and the new hospital was constructed on its present site, this land being then occupied by the old City Hospital and was donated by the city for this purpose.

Since its opening in 1906 great advances have taken place in the treatment of medical and surgical diseases. The program of medical education has been widely extended and with a limited appropriation the hospital has had a terrific struggle to keep abreast of the times. That it has succeeded is demonstrated by the fact that it was the first hospital in South Carolina to be classified as an "A" hospital by the American College of Surgeons and the American Hospital Association.

The hospital is maintained by appropriations from the city made annually on a budget system. In the past, though in many instances generous, these appropriations have never been sufficient to meet the ever growing needs of the hospital. Since 1920 appropriations have been received from the county, and the hospital has been designated as the County Hospital. In order to obtain this appropriation it was shown that the Roper Hospital had in the past cared for a large number of cases who lived just outside of the city limits and in various other portions of the county. The amount received from these sources barely covers the increasing number of pauper patients of the county. Besides these moneys, in recent years bequests have been made to the Medical Society for the maintenance of the hospital. The income from these endowments is coming in and the hospital is improving and extending its usefulness.

The Roper Hospital, in its conception and management, is unique. There is perhaps no other hospital in America which has been established on such unusual lines. It is op-





MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA



erated by the Medical Society of South Carolina as trustees for the Roper Hospital and other bequests; it is maintained by city and county appropriations, by fees from its private departments and by income from endowments. Professional service is rendered through the faculty of the Medical College of the State of South Carolina. The Medical Society manages the hospital through a board of commissioners which are elective officers of the Society. The Dean of the Medical College is responsible to the Board for the proper professional care of the patients. By this arrangement most satisfactory results are obtained. Enlightened citizens are recognizing more and more the necessity of endowments to the hospital under the present system of management and they have an opportunity to make endowments through a responsible body—the Medical Society. Municipally owned and operated hospitals rarely appeal to those wishing to make benefactions to help the poor and unfortunate. Whereas with privately managed support the hospital appeal is stronger.

The relation of the Medical College to the hospital is most happy. The Hospital furnishes the clinical material for study and investigation. The Medical College furnishes the laboratory facilities to help in the clinical investigations of cases, and it furnishes its all time faculty members as laboratory experts. In this way there is a great saving financially for both institutions and the arrangement is most satisfactory from the standpoint of scientific research and study. The Hospital is managed by a superintendent under the direction of the Board of Commissioners. There is a nursing staff consisting of a directress of nurses, seven supervising nurses, one anesthetist and one dietitian. The professional service is rendered by a physician-in-chief and fifteen attending physicians, a surgeon-in-chief and twenty-three attending surgeons and two consulting dentists.

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#### HISTORY OF THE MEDICAL COLLEGE

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It was in 1821 that the idea of establishing a medical college in Charleston originated in the mind Dr. Samuel Henry Dickson, who discussed it with his colleagues, Dr. James Ramsay and Dr. Henry R. Frost. The following year Dr. Thomas Cooper, President of the South Carolina College, in a letter ad-

ressed to Dr. Wagener, suggested that "the medical board of your city be called to consider the expediency of coinciding with us here in the plan of a medical school." The Medical Society of South Carolina expressed itself as heartily in sympathy with Dr. Cooper's suggestion, but thought that Charleston was the appropriate place for the establishment of the proposed college, and a committee was appointed to memorialize the legislature, praying for the organization of a medical school at Charleston. Inasmuch as an appropriation was requested, the legislature failed to approve the proposition. During the summer of the following year, 1823, Dr. Ramsay and Dr. Dickson delivered a course of public lectures on surgery and physiology and the practice of medicine. In the fall of the same year a second memorial was presented to the legislature requesting authority to establish a medical school and to confer degrees, this time with success, because an appropriation was not requested.

Under this authority, the Medical College of South Carolina opened its doors in November, 1824 with the following faculty:

Dr. John Edward Holbrook, Professor of Anatomy.

Dr. James Ramsay, Professor of Surgery.

Dr. Samuel Henry Dickson, Professor of the Institutes and the Practice of Medicine.

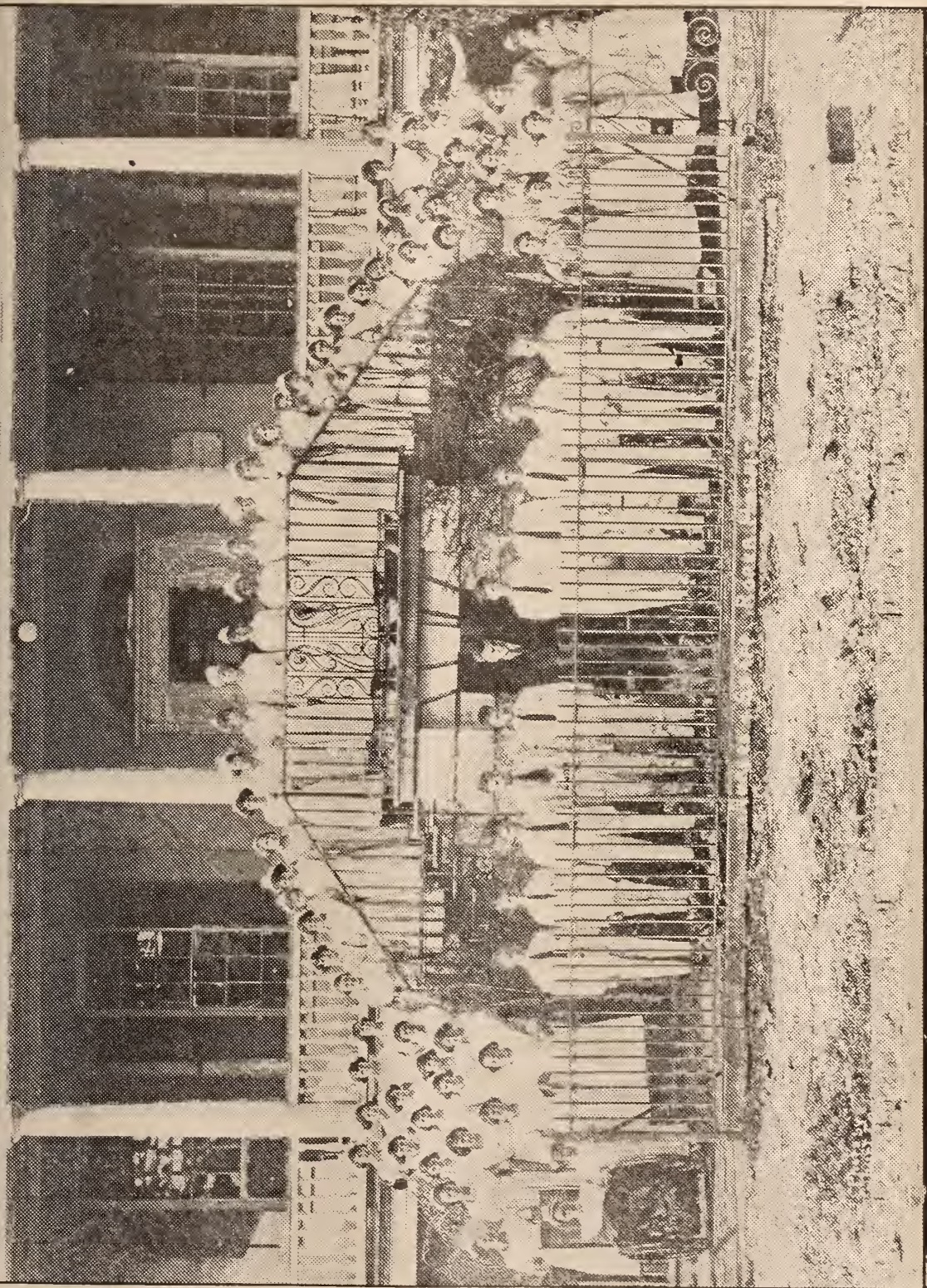
Dr. Thos. G. Prioleau, Professor of Obstetrics and Dean of the Faculty.

Dr. Edmund Ravenel, Professor of Chemistry and Pharmacy.

Dr. Henry R. Frost, Professor of Materia Medica.

The growth of the new college so far exceeded expectation that in less than ten years nearly one thousand students had been enrolled. With this rapid expansion it soon became necessary to provide other quarters and the City Council was petitioned to appropriate \$15,000.00 for a new building in return for the assumption by the society of medical attendance upon the charitable institutions of the city for a period of 25 years. The offer was accepted, and with this money the college building, which still stands on Queen Street, was erected and opened in 1827. In 1825 Governor Manning recommended, in his annual message, an appropriation of \$10,000 to be "placed at the disposal of the faculty of the said college for the completion of their buildings, and the purchase of apparatus necessary and proper for such an institution." Another appropriation of \$7,000 was made by the legislature in 1830, upon the recommenda-





THE NURSES HOME AND STAFF



tion of Governor Stephen D. Miller. It is thus evident that the State recognized the importance of nurturing this young and virile institution, in order to educate at home many young men who would otherwise have gone abroad for their professional training.

In 1831 a difference occurred between the Medical Society and the faculty of the Medical College, as a result of which the latter body organized a new college under the name of the Medical College of the State of South Carolina, which was chartered in 1834, and occupied the old Broad street theater. For the next five years both colleges continued in operation, but the new institution, which comprised the old faculty, was most successful and at the end of this time the Medical College of South Carolina passed out of existence by merging with the Medical College of the State of South Carolina. Up to the period of the Civil War the Medical College of the State of South Carolina enjoyed an enviable reputation and turned out a number of most distinguished graduates. During the Civil War the college was of necessity closed, but reopened its doors again in 1865, from which time it has been in continuous operation. In 1881 the old charter was amended by the State Legislature, so as to allow the creation of a department of pharmacy, which was organized in 1882. This department continued in operation for only two years, but was again reopened in 1894.

With the reorganization of medical education throughout the country effected by the Council on Medical Education of the American Medical Association, it became apparent that this old historic college could no longer bear the burden alone and would be forced to close its doors if it still continued as a proprietary institution. In 1913, therefore, the trustees and faculty offered the college to the State. Both Governor Blease and the legislature realized that such an offer could not be regarded lightly, and that a valuable institution should be saved to the State and given the opportunity to develop along modern lines and become even more useful than it had been in the past, and in February a bill was passed making the institution a State College in fact, as it had long been in name. Two months later the citizens of Charleston raised a fund of \$76,000 for the purpose of erecting a new building in juxtaposition to the new Roper Hospital.

The Medical College, under the fostering care of the legislature, has taken on new life and with its faculty greatly enlarged, and

equipment increased to meet the demands of modern medical training, has come again to occupy a position of the first rank among the medical colleges of the country.

The early faculty of the college included men of national and international reputation, and the brilliant attainments and reputation of its faculty attracted a large body of students from various sections of the country. From its organization the faculty have had in view the growing and changing requirements of medicine, and have been among the first to provide additional instruction to meet these demands. It was one of the first of Southern colleges to adopt a three-year course of study, and later to require a four-year course. It also took an advanced stand in adopting the higher entrance requirements now in force.

The work so eminently carried out by its distinguished founders has been continued by its present faculty and associates, and the laboratory and clinical instruction have kept pace with the exacting demands of modern medical teaching. There are 67 professors and instructors engaged in the teaching of the various branches, of whom 21 devote their entire time to college work. Among the number are graduates from various colleges representing a number of States, and men of wide reputation and broad scientific attainments. This breadth of training and variety of service and experience insures a comprehensive view point of the field of modern medicine, pharmacy and nursing and a knowledge of the methods of instruction and opinions of the leading medical and pharmaceutical centers of teaching and research.

The college is classified as a Class A college by the Council on Education of the American Medical Association, the Association of American Colleges and the American Conference of Pharmaceutical faculties. This means that in the opinion of these bodies the college is well organized and equipped for efficient medical and pharmaceutical instruction, that the college ranks with the leading medical colleges of the country, and that the students and graduates enjoy the same privileges as those of the large universities.

In 1918 the Roper Hospital Training School for Nurses became an integral part of the Medical College under the name of the School of Nursing of the Medical College of the State of South Carolina. The college now includes the three schools of medicine, pharmacy and nursing, and is looking forward to a future of continued and increasing strength and usefulness.



## ORIGINAL ARTICLES

### SOME OBSERVATIONS MADE IN THE TREATMENT OF THREE HUNDRED CASES OF HEM- ORRHOIDS BY THE IN- JECTION METHOD.

By *Thos. Brockman, M. D., Greer, S. C.*

As interpreted by the Greeks the term "hemorrhoids" means a passive or active flow of blood, and the word "pile" from the Latin *pila* signifies a ball or swelling.

**HISTORIC NOTE**—Hemorrhoids have an interesting history having been mentioned ten centuries before the Grecian Era or the time of Hippocrates, and it is said that "pile doctors" were in Egypt before Joseph was sold into bondage.

**GENERAL REMARKS**—Hemorrhoids are the most common affection treated by the Proctologist. Many persons go through life suffering from hemorrhoids without applying for treatment because an examination is repulsive, they cannot afford the expense of an operation, fear a general anaesthetic, dislike being confined to bed or dread discomfort and pain incident to their removal. Hemorrhoids often induce discomfort, pain, or hemorrhage, but I have never known of a patient to die from them. Piles are encountered in all climates and walks of life both sexes, at all ages, debilitated and robust individuals, persons following sedentary and active occupations, and people living amid luxurious and poor environments, but are more common during active periods of life. Hemorrhoids vary in form, location, number, size, color, consistences and appearance.

**LOCATION**—Hemorrhoidal tumors may be located in the lower rectum or just outside,

at the anal margin, and are designated accordingly internal and external.

#### ETIOLOGY

No attempt is made to discuss all factors in, or the many diseases said to have induced hemorrhoids. The causes of hemorrhoids are Pre-disposing and Exciting.

Pre-disposing—are hereditary, temperament, environment, climate, seasons, habits, sex, occupation, age, and anatomic peculiarities of the bowels.

**EXCITING CAUSES**—The chief exciting factors in the causation of hemorrhoids enumerated in the order of their importance are constipation, diarrhoea, purgation, medication, dietary indiscretions, irregular and indolent habits, emotional disturbances, other anorectal affections, constitutional and diseases in neighboring organs, hypertrophy and spasm of the levator ani or sphincter muscles, warm enemata, pregnancy and parturition, friction, irritating suppositories, pessaries, anorectal injuries and habitual straining at stool.

#### CLASSIFICATION

Hemorrhoids according to their location and coverings are classified as follows:

**FIRST, EXTERNAL**—Visible-covered by skin.

**SECOND, INTERNAL**—Invisible-covered by mucous membrane.

**THIRD, EXTERNO**—Internal-combination-mixed-covered by skin and mucosa.

Hemorrhoids have been designated by physicians, nurses of the laity as hard, soft, itching, weeping, protruding, bleeding, sticking, blind, inside, outside, red, blue and constitutional piles all of which fall within the above classification.

External hemorrhoids are for clinical purposes divided into venous and cutaneous types. There are two kinds of venous hemorrhoids, thrombotic and varicose; and cu-

taneous piles may be subdivided into redundant and hypertrophic forms.

#### EXTERNAL THROMBOTIC

**ETIOLOGY**—Thrombotic make their appearance suddenly during straining at stool, horseback riding, walking, violent exercise or lifting of heavy loads and are frequently encountered in young or middle aged robust individuals not having previously suffered from rectal trouble. This form differs from cutaneous piles in their sudden onset, acute pain, and quick disappearance.

**PATHOLOGY**—Some authorities claim that thrombi form within the vein and others without the vein. Gant says that he has demonstrated to his satisfaction that venous clots may form either in the blood vessel or collect in adjacent tissue subsequent to perforation or rupture of a hemorrhoidal vein or its off-shoot. Thrombi are comparatively rare within the vein and are most often encountered beneath the anal integument of individuals having phlebitis, sclerosis of vessels, or other disease that roughens or causes the internal coat to break. Where a thrombus is present in a vessel the tumor requires days to form, is small, rarely visible, and is not detected except through palpation. The chief argument against thrombi in the veins is they are not sufficiently large to accommodate the considerable amount of blood that distends the average thrombotic pile.

**SYMPTOMS**—Ordinary thrombotic hemorrhoids suddenly appear following the evacuation of hardened feces straining from any cause, or lifting a heavy load. In the beginning there is a pricking or uneasy sensation at the anus, later as bleeding continues, the clot enlarges, skin tension is increased and the patient complains of pain, swelling and annoying sphincter algia. Acutely inflamed tumors are hypersensitive and cause considerable pain, sphincteric irritability, constipation, painful defecation and prevent the sufferer from obtaining rest or sleep in any position.

Treatment of thrombotic hemorrhoids is Surgical. Time is not wasted with palliative measures. Surgical intervention is not

objectionable because elaborate preparations are unnecessary, the operation is painless performed in five minutes under eucain or novocain anaesthesia, does not confine the patient to the house, post-operative pain is slight and a prompt cure invariably follows incision and evacuation of clot.

External Varicose piles—cause but little annoyance and are rarely recognized or treated except when associated with some other disease.

External cutaneous piles are removed under local anaesthesia in the office. They are nothing more than connective tissue or skin tags easily excised with scissors.

#### INTERNAL HEMORRHOIDS

Internal hemorrhoids are common and the majority of adults suffer from them before they reach their fiftieth year. They are found more often in men than women and rarely seen in children. They are common in all countries and climates, met with in different races, attacks persons in all stations of life and those following sedentary and active occupations and affect robust or debilitated individuals with equal frequency.

Internal hemorrhoids cause annoyance or considerable mental and physical suffering when they bleed, protrude or become ulcerated or strangulated, but seldom terminate fatally unless they degenerate into cancer or ulcerate into a large vessel and bleed copiously, causing anemia, exhaustion or death which occurs more often than the profession is aware of.

Many individuals affected with internal hemorrhoids are but slightly inconvenienced, and in consequence defer examination and treatment for months and years. Venous internal hemorrhoids may be arterial, venous or mixed, globular, tortuous or oblong in shape, vary in number from one to seven, have a bright red purplish or bluish tint, remain above the sphincter, or protrude through the anus, and have a slightly pedunculated or broad attachment.

There are three types from a clinical view point, thrombotic, capillary and venous or mixed. The internal thrombotic are rarely

seen and resemble external thrombotic and are treated alike.

The capillary type are of less significance and will be referred to again.

The internal venous or mixed type are our chief offenders to the mass of humanity. The chief manifestations of varicose internal hemorrhoids are protrusion, hemorrhage and pain, and one or the other causes the patient to seek relief. Patients usually do not discover piles until they protrude or bleed or give pain at stool. The pain, hemorrhage, and protrusion often go hand in hand with a gradual increasing discomfort and finally to the stage of failure to recede strangulation results. I have had several robust, young active men and women come to me in this condition and with torture and distress written all over their features with a history of several days and nights of this suffering and the use of all kinds of local applications such as heat, salves, morphia and no relief. Quite a number have the daily dread of this strangulation, the inability to attend business engagements if they were so unfortunate as to have to go to stool in the early morning. The shock brought about from the ordeal from reducing these strangulated piles would so completely exhaust their nerve force, until all work and pleasure was arrested for a day in bed.

So much for symptoms, classifications and etc., because the most interesting feature of this subject to both you and me is the method, the remedy, the cure. The higher ideals of medicine are constantly and ever stimulating all of us to try and master infirmities and diseases, and no set of men are more honestly and earnestly seeking knowledge and improvement of methods than are medical men. Unfortunately very often all of us are held back and kept from advancing by misguided or prejudiced views, and especially is this true in so far as the injection method of treating internal hemorrhoids. No doubt there are many who are doing lots of harm and are now doing harm with some poison solution some sloughing

solution but to my mind there is no part of my work in the general practice of medicine for fifteen years that has been as satisfactory to me and the patient as the injection method of treating hemorrhoids has been for the past eighteen months. The technique is very simple and absolutely safe. I use two sizes of an ordinary Brinkerhoffs sliding door speculum and a long gold pointed needle with a guard very similar to a tonsil needle, and inject high up, say two inches, from five to fifteen minims of a five to nine per cent quinine and urea hydrochloride solution, or a ninety five per cent alcohol solution or an eight per cent phenol with two per cent alcohol in essential oils. The technique consists in the simple process of introducing the speculum on right side first with patient lying in left Sim's position and of slowly withdrawing the sliding door for about three-fourths of an inch. The internal pile will drop into this space and from five to fifteen minims are injected into the base of the pile tumor. This procedure is followed on left, front, and back. The injections are repeated from five to seven days for at least four consecutive injections at which time the patient is instructed to come back within two to four weeks when further injections are made if needed. Out of three hundred patients who have come to me for treatment in the last eighteen months I have used the last named solution in about sixty per cent of the cases; the solution of quinine and urea in about thirty per cent and a ninety five per cent alcohol in ten per cent of the cases. I find all three solutions to have their special field in the rectal injection of piles.

The varicose or venous type of piles responds more satisfactorily to the phenol and alcohol solution. The strangulated piles calls for quinine and urea hydrochloride 9 per cent solution for its anaesthetic effect. The capillary or strawberry type of piles seen more often in what I have termed in the border line T. B. cases or Pellagrins, responds best to alcohol injections. The mixed interno-externo type do best under an



alternative treatment or first the phenol solution then the quinine and last the alcohol, but due to the frequency of protrusion through the external sphincter in this type I invariably advise a local anaesthetic of which can be quickly and easily performed with novocain or eucain solution. Everything is not flowery beds of ease in all forms and cases of piles, but the larger per cent of my patients tell me that the discomfort incident to the injections is no worse than those of piles without treatment and in many instances they report they have felt better with each injection with no bleeding nor protrusion since the first injection. Others have reported some slight discomforts for the first day and night. Very few have discontinued the treatment because of pain and inflammation produced. And invariably this has always occurred in the interno-externo or mixed type of piles. This treatment is not an experiment but a demonstration. The merit of this method of treatment lies in the composition of fluid used and the adaptability of proper fluid to diseased tissue and the technique of administering not too large nor too small an injection as the case may be. In other words, we are striving with this method of treatment to create a subacute inflammation and cause a re-attachment of the lining or mucuous membrane of the gut to the rectal wall. Naturally the success of the treatment depends entirely on our knowledge and understanding of when this subacute inflammation is sufficiently produced to cause a healing process to take place and then to quit and rest and allow nature to repair and heal. I believe any mild fluid injected too heavily and persistently will produce harm and probably sloughs should we not observe care as in any other line of medical skill. May I ask how many cases of incontinence are brought about by the amateur surgeon and sometimes by the best of surgeons from doing some of the various forms of pile operations such as Whitehead's for instance. When we doctors throw down all of our prejudice against the injection method

of treating hemorrhoids and devote as much of our time to a conscientious and honest effort in treating this malady as we have in many of the other lines in medicine and surgery we will all be elated over the results. There surely is not a more neglected field in medicine or surgery. There certainly cannot be as much confusion and lack of understanding about any other part of our anatomy.

Why allow the advertising quack to inject fifty per cent carbolic acid or other sloughing solutions when we go on cursing the pile doctor with no other honest effort except surgery. Surgery is all right and a local anaesthetic operation is quite attractive and should be done often to those who are willing to have it done, but to those who refuse the knife and are fearful of the knife must we allow them to go on bleeding and suffering without any relief? If all the merits of the injection method of treating piles should be wiped out in the young and middle aged I would commend it to the profession for the exclusive benefit of the old man who has been bleeding and protruding and wearing his pads and supports for fifty years in order that I might give him a little taste of real high life in that he could enjoy a few real normal healthy bowe movements in his last days.

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## NOTES ON THE PROGRESS OF THE SCIENCE OF NUTRITION

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*By William Weston, M. D., Columbia, S. C.*

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The literature that has grown up in the last few years relative to problems in the science of nutrition has been of such vast proportion that those who have attempted to keep themselves informed have met with a truly bewildering task. Fortunately for those who were determined to pursue the subject, their diligence and perseverance have been abundantly rewarded by having learned of some of the most brilliant and specta

cular discoveries yet recorded to the achievement of science.

Investigators have studied the subject from many points of view in their effort to learn the true value of foods and their relationship to the vitamins, the glands of internal secretion, and the role each assumes to each other and to the science of nutrition. Many important facts have been learned from time to time, but it has taken time to correlate them into a homogeneous mass for practical use.

The difficulties confronting investigators in this field of science have been enormous, because of the manifest limitations of other sciences.

Hardly had serious investigations begun before the limitations of chemistry became an embarrassing reality and investigations had to proceed along other lines. Despite the new methods introduced in physiological chemistry in the effort to explain facts repeatedly demonstrated this science has found itself unequal to the opportunity presented. Histology has had to be studied from a different point of view and from an altogether broader field. Bacteriology has been given new and difficult tasks to work out. There has been added to the study of pathology much new and interesting material of an altogether different nature from any previously undertaken.

In fact, problems presented by the various investigations of faulty diets were so involved that it soon became evident that their solution could not be accomplished by any single science, but rather upon the co-operation of the several sciences. This conclusion having been reached and its application put into effect, the science of nutrition has become, of all the sciences, the most interesting, the most important and the one most likely to achieve the ultimate object of all scientific investigation, namely to give man the control over the laws of nature.

The so-called fundamental nutrients; fats, carbohydrates, proteins and mineral salts have been studied by chemical methods for more than a hundred years, during which

time there was a great deal learned. Within the last few years since the adoption of new methods of investigation and the introduction of new material, such as the vitamins and the influence of some of the endocrine glands, many opinions formerly held have had to be revised or given up. Especially does this apply to the fats, proteins and mineral salts.

The fats differ as to food value. Some are almost worthless while others are not only valuable but are indispensable for the maintenance of health. We have been taught for many years that fats are the most important source of energy to the body, that they save the body waste and increase the body weight. We know now that this statement must be qualified, because, some do not contain the fat soluble A vitamins, without which health cannot be maintained. If hog lard in unlimited quantity were the sole source of fat in a given diet, the person to whom this diet was given would soon die from malnutrition or some intercurrent diseases.

Protein is essential to life, because, it is the only kind of food capable of replacing the nitrogenous waste of the body cells which is constantly taking place. It is also an important factor in the promotion of growth, but by no means as important as physiologists formerly thought. The value of a protein is determined by the number and variety of amino-acids it yields on digestion. The more nearly these proportions correspond to the content of amino-acids in the tissues of the growing animal, the more effectively can food proteins be transformed into body proteins.

It has only been known a comparatively short time that there exists such a great variation in the composition of proteins from different sources. Some do not contain any amino-acids, others a few, while others may contain many.

Of great practical value was the demonstration by Osborne, McCollum and others, that the protein mixture found in such common foods as the grains, tubers, meats, etc.,

may be regarded as biologically complete, but their biological values differ greatly depending on the yield of the several amino-acids obtained from them. Therefore, since it is known that there are eighteen or more amino-acids, it is important in order to obtain this requisite of life in ample quantity and quality it is necessary to consume a number of such proteins as are known to be rich in amino-acids.

Investigations made in the study of nutrition has revealed valuable information in regard to the mineral salts. It has been known for many years that certain mineral elements in sufficient quantities are essential to normal functioning of the tissues. We have also known that the bones consist in a great part of calcium, phosphate and magnesium. Calcium salts are responsible for the coagulation of the blood and are vitally concerned in the digestion of fats. Free hydrochloric acid in the stomach without which pepsin cannot in the process of digestion act upon protein is derived from sodium chloride, an element obtained from the food we eat.

The element sodium is also present in the blood in considerable quantities, in the form of bicarbonate, carbonate and phosphate. These salts with calcium, magnesium and potassium in delicate proportion in the plasma of the blood are necessary in order to take up and neutralize the acids formed during metabolism, and aid in maintaining the body fluids in a state of neutrality which is a fundamental condition of life.

The alkali balance in the blood plasma is necessary in order to carry carbon dioxide to the lungs for elimination. When the alkali reserve falls below normal or the balance becomes disturbed the kidneys fail to excrete acid phosphate and there ensues that much misunderstood and very grave condition—acidosis. This condition is unknown in children who receive an adequate supply of vegetables and fruit juices in their diet.

In no other way than by the diet can the mineral salts be supplied to the system.

As important as are the elements just considered investigations by a host of scientists in this country and abroad have definitely proved that normal nutrition requires and natural food supply furnishes other elements without which there can be no such thing as nutritional well being. If withdrawn for a time disease ensues, if for a considerable length of time death results. The generally accepted name for these elements are vitamins. We do not know their chemical structure, but we know a great deal about their action and the sources from which they are supplied.

The classifications of vitamins will in all probability be materially changed in the near future by the addition of other vitamins. At present the generally accepted classification is as follows: Fat soluble A., Water soluble B., and antiscorbutic C.

Fat soluble A. It has recently been demonstrated by Goldblatt and Zilva of the Lister Institute in London that the growth-promoting and anti-rachitic properties of cod liver oil are inactivated at different rates by heat in the presence of air. McLendon and Shuck of Minnesota, have within the last year demonstrated that spinach when fed to animals suffering from Xerophthalmias effected a cure, but had little or no remedial effects on rickets.

These experiments would indicate that there exists more than one fat soluble A. vitamin.

The chief function of the fat soluble A. vitamins are to promote growth and exercise a stabilizing influence over the mineral salts.

They appear also to exercise an important influence over reproduction and lactation.

These vitamins when insufficiently supplied tends to weaken the body and make the individual more susceptible to such diseases as tuberculosis, rickets, pellagra and renal calculus. Its absence is directly responsible for a disease of the eyes known as Xerophthalmia.

As important as the fat soluble A. vitamins are to the adult in preserving good



health they are more important to the child since they are essential to growth and development. They are vitally concerned in determining the time of dentition and the character of the teeth.

Fat soluble A. vitamins are not synthesized in the body, but may be stored in the body for a considerable length of time. They stand long exposures to high degrees of heat, but are quickly inactivated by oxidation.

The fact that they are not inactivated by high degrees of heat has an important bearing upon the feeding of butter fat to infants and young children, because, much more butter fat can be given if it is boiled and the fatty acids eliminated.

A great variety of foods are sources of these vitamins, among the more important are: cod liver oil; butter; kidney; liver; alfalfa; spinach; green cabbage; string beans; wheat; whole grain of rice; carrots; milk; cheese and egg yolk.

Vitamin B. at present includes: First, the antineuritic vitamin found by Eijkman in rice polishings and later by others in a great variety of animal and vegetable substances, the absence of which causes polyneuritis in fowls and beriberi in man: Two, a water-soluble, growth-promoting substance found in milk, wheat embryo, yeast and many other foods.

This vitamin is essential to normal nutrition and when deficient or absent health steadily declines. Animals deprived of this vitamin quickly lose their appetite and in the young fail to grow.

It is claimed by investigators to be an important physiological stimulant to glandular metabolism. It is also said to be concerned in the metabolism of carbohydrates.

It is readily soluble in water and may be absorbed from solution by fuller's earth. It is relatively stable to heat and oxidation, and is more stable in acid than in alkaline solution.

Its chief sources of supply are the grains, nuts, certain fruits, tomatoes, grape fruit, lemon and orange, nearly all the vegetables,

yeast, milk and its products, fish and fish roe, brains, heart, kidney and liver.

Vitamin C. This vitamin when absent from the diet produces the symptom complex which we recognize as scurvy. It seems also to exercise an influence over calcium metabolism, since its absence from the diet results in various forms of hemorrhage. When present in the food of young animals it promotes growth and well-being. Its presence in the food of animals for all ages is necessary to health and life.

High temperature for a short while is less destructive to this vitamin than prolonged exposure to a moderately high temperature for a long period of time. Contrary to the popular impression neither acid nor alkali lessens the destructive influence of heat upon this vitamin.

It is well known that such antiscorbutic foods as tomatoes, orange juice and lemon juice have a high initial acidity retain their antiscorbutic property to a much higher degree when dried than does cabbage or potato which are less acid.

The question is constantly arising whether the process of drying milk destroys or impairs its antiscorbutic properties. This depends upon the drying process. If the milk is dried by the just roller process, a method by which the milk is quickly dried, there does not appear to result any deterioration.

The presence and quantity of this vitamin in milk will depend upon the diet. If food is eaten that is rich in vitamins the milk will be correspondingly valuable in this respect.

Chief sources of supply: Cloudbberries, raspberries, lemon and orange juice, cabbage, tomatoes, carrots, beans, legumes, lettuce, onions, swede, rutabaga, and sprouted grain.

There has been a great deal of discussion as to the relationship of the glands of internal secretion to nutrition. There have been many theories advanced from time to time, many of these remain unproved or have been definitely disproved. The opinion has been generally accepted that the thy-

roid exercises a definite influence upon metabolism.

The parathyroids seem to exercise a decided influence upon calcium metabolism.

Cramer, a British investigator, contends that there is a constant relationship between the "glandular" adipose tissue and the adrenal cortex. He suggests that the "glandular" adipose tissue is a reservoir of fat soluble A. vitamin, since the disappearance of the characteristic lipins from it and the adrenal cortex is followed by death.

It is scarcely necessary to remind you of the great benefit this new nutritional knowledge has brought to people of meagre means in supplying them with information that will readily enable them to select foods at reasonable cost that are known to contain such elements as are necessary to conserve health and produce vigor and strength.

It has only been a comparatively short time since the foremost authorities in pediatrics taught that a mother's milk was not directly influenced by her diet. At present we know that not only the quantity but the quality of her milk depends entirely upon her diet. Moreover, we now know that the supply may be bountiful, it may contain the requisite amount of fats, carbohydrates, protein and salts and still be deficient. In fact under such circumstances a child depending upon such milk may develop rickets or scurvy. This deficiency can only be supplied by diet.

The absurd notion still prevails that in the selection of cow's milk its nutritional value is determined by the percentage of butter fat present and its index of safety determined by the number of bacteria per c. c.

What are the facts as proved by scientific investigation? 1st: The relative value of butter fat is determined by the amount of fat soluble A. vitamin present. If the butter is originally yellow it will contain a large amount of this vitamin and if originally white it is poor in this element. The color is not a factor in determining the fat percentage. It is manifest that this test does

not take into consideration the relative amount and value of protein, nor does it consider the salts, although of the utmost nutritional importance. The only possible manner that these facts may be ascertained is by knowing the quality and quantity of food the cow eats. 2nd: We have learned that prolonged heat at a temperature of 150 degrees F. such as is required for the pasteurization of milk is more destructive to the vitamins than is a temperature of 212 degrees for two or three minutes. The latter method is probably more destructive to bacteria than is pasteurization.

The reason why a child after the first year does not continue to thrive when the sole article of diet is milk, even though of excellent quality and sufficient quantity, is because of its deficiency in iron.

This deficiency must be supplied from the vegetable kingdom.

Hominy (grits) served with butter is the cereal of choice in this part of the country. The choice may or may not be wise. If the hominy is from yellow corn it will possess about twice the value of hominy from white corn. If the butter is to be served to a child a great deal more may be safely used if the butter is placed in a covered vessel over a flame for thirty seconds and the fatty acids allowed to escape.

Certain vegetable juices are of great value during the second year and thereafter, as a source of protein, vitamins and mineral salts.

Green cabbage, spinach, alfalfa and carrots are especially valuable, but if boiled in the presence of air they lose much of their value.

Cereal grains while containing every organic element found in the animal body, and every one which is a necessary component of the diet, on account of too small amount of the chlorides of sodium, potassium and calcium to promote growth may also cause acidosis by not furnishing to the blood stream the necessary amounts of mineral nutrients required for normal nutrition. Therefore, as important and valuable as are these

foods they should not be depended upon unless taken in conjunction with vegetables.

### BIBLIOGRAPHY

Acid Base Metabolism. Shohl, D. W. and Sato A.

Amino Acids in Nutrition and Growth. Osborne and Mendel.

Bulletins of the Association for the Study of Internal Secretions.

Causes and Management of Athrepsia. William Weston, M. D.

Civilization and Climate. Huntington.

Diseases of Infancy and Childhood. Holt and Howland.

Further Observations on the Influence of Natural Fats upon Growth. Osborne and Mendel.

Influence of the Diet on the Anti-Scorbutic Potency of Milk. Hart, Steenbock and Ellis.

Infantile Scurvy, A Study of its Pathogenesis. Hess, A. F. Journals A. M. A.

Milk as a Source of Water-soluble Vitamin. Osborne and Mendel.

Neutrality Regulation in the Body. Wilson, D. W.

Pediatrics. Dunn.

Pediatrics. Abt.

Parabiosis in the Study of Deficiency Diseases. Dragsted, L. R. and Cooper, E. F.

Relation of Fodder to the Antiscorbutic Potency and the Salt Content of Milk. Hess, A. F. and L. J. Unger.

Some New Constituents of Milk. Osborne, T. B. and Wakerman, A.

The Newer Knowledge of Nutrition. McCollum.

The Vitamins. Sherman and Smith.

The Comparative Nutritive Value of Certain Proteins in Growth and the Problem of the Protein Minimum. Osborne and Mendel.

The Effect of Butter-fat on Growth. Osborne and Mendel.

The Vitamins in Green Foods. Osborne and Mendel.

The Suppression of Growth and the Capacity to Grow. Osborne and Mendel.

The Nursing Mother as a Factor of Safety in the Nutrition of the Young. McCollum and Simmons.

The Essential Factors in the Diet. McCollum and Davis.

The Relationship Between the Growth-Promoting and Anti-Rachitic Functions of Certain Substances. Goldblatt, H. and Zilva, S. S.

The Presence of Anti-Opthalmic Vitamin and the Absence of Anti-rachitic Vitamin in Dried Spinach. McLendon, J. F. and Shuck, C.

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### THE DIAGNOSIS AND TREATMENT OF PLACENTA PREVIA

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*By Lester A. Wilson, M. D., Charleston, S. C.*

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A hemorrhage in the latter months of pregnancy or during the first or second stage of labor is one of the most formidable conditions that an obstetrician has to deal with. Where there is such a hemorrhage, one can expect to find either a premature separation of the placenta or a placenta previa. Other causes of antepartum hemorrhage are Ectopic gestation, ruptured uterus and cervical laceration. However the last named condition can usually be eliminated without difficulty.

Occasionally a typical placenta previa is seen in which the diagnosis is made by such symptoms as painless, causeless hemorrhage, bright red in color and if observed closely may be found to increase between the pains and to almost cease during a pain. This bleeding may occur while the patient is up and walking about, or sometimes occurs at night while she is asleep only to awake and find herself drenched with blood.

The placental souffle in some cases is heard just above the symphysis pubis. On vaginal examination the cervix and fornices are boggy, pulsation is increased and a

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cushiony mass can be felt between the examining finger and the presenting part.

In premature separation of the normally implanted placenta, the symptom complex is different. The patient is usually a multipara, at or near term with a history of toxemia, high blood pressure and albuminuria, which predisposes, by the formation of placental infarcts to placental separation, or perhaps there is a history of trauma as for instance a kick, a fall or severe straining. With the onset the patient experiences a sudden uterine pain at the placental site, nausea and shock, rapid pulse and a fall in blood pressure in proportion to the amount of blood that has been lost.

Abdominal examination reveals a hard but tender uterus, or if the bleeding has been excessive the uterus may be flaccid and filled with retained blood, the foetal parts obscure and the foetal heart sounds labored or absent, the hemorrhage if visible is dark and clotted, or perhaps just a serum.

In view of the fact that the symptoms of premature separation and placenta previa have so much in common, pain may be present in a previa when in labor, or the blood may be clotted when seen by the obstetrician, while in a premature separation the hemorrhage can be a bright red, or the pain absent. Leaving but one method of making a positive differential diagnosis in a fairly large percentage of cases, this is by vaginal examination. Here one finds the placenta situated in the danger zone or lower segment of the uterus, a blood clot situated in the cervix feels to the examining finger very much like a placenta but differs in that the placenta is tough and will not disintegrate or tear as a blood clot will. If the foetal surface of the placenta can be reached with its smooth surface on which radiate the numerous veins the diagnosis is easy. In those cases where the placenta cannot be palpated and where there is an escape of serum when the presenting part is raised, the diagnosis of premature separation is justifiable.

I would like to warn you not to make a vaginal examination until the patient is in a hospital, the vulva shaved and painted with Tr. Iodine, preferably anesthetized and instruments ready for immediate treatment, for in the majority of cases, a vaginal examination will produce another hemorrhage and one that may be fatal. This accident has occurred to me, the hemorrhage starting a few minutes after I had finished the examination.

Infection is a frequent complication. Especial care should be exercised not to infect the patient before she reaches the hospital. Do not pack in the home unless it becomes absolutely necessary.

A correct diagnosis is important because the objects to be carried out are opposite. A previa if delivered by the natural route requires a slow dilatation of the cervix to prevent laceration, and the conservation of blood at every step, while a separation must be delivered quickly if the patient is to be saved.

The treatment of placenta previa is necessarily heroic, as the mortality with the best treatment is for the mother 12 per cent, and for the child 60 per cent.

It is generally conceded that there is no expectant plan of treatment for placenta previa. Once the diagnosis is made the patient must be delivered, if not in labor, she should be induced. Except in rare instances where a viable child is especially desired, as an old primiparae one might temporize a few days when the child is near viability, provided the mother consents to remain in a hospital where immediate treatment can be instituted should the hemorrhage return.

In the central type where the cervix is not dilated and the genital tract not infected, abdominal cesarean is the operation of choice. The advantages of this plan of treatment are first, the terrible infant mortality is reduced, second, the loss of blood is not so great, and third, if the hemorrhage cannot be controlled after delivery a hysterectomy can be easily performed. One must bear in mind that the danger is not over

when the patient is delivered. In those cases of previa caused by a membranous placenta, which is spread over a greater part of the uterus, a hysterotomy followed by a hysterectomy is especially indicated.

The marginal and lateral types with the cervix effaced and dilatable can best be treated by means of a placenta previa bag (No. 6 Voorhees). This is placed either within the bag of waters or better still extra ovular, which Polak of Brooklyn describes in a recent article; the bag is placed between the membranes or placenta and the cervical walls. I have had good results with extra ovular insertion of the hydrostatic bag. The foreign substance pressing against the bleeding sinuses seems to cause clotting in them, thus lessening the danger of postpartum hemorrhage. Further if the membranes are not ruptured the infant has a better chance. In either method after the bag has been placed and filled gentle traction should be maintained upon it, so as to keep a constant pressure against the bleeding points. The cervix must be allowed to dilate slowly, but just as soon as it is fully dilated, a rapid delivery is necessary. For this purpose I prefer an internal podalic version. Forceps could be used but takes more time and the hemorrhage here is often torrential.

There are other plans of treatment, and all of them have their advocates.

Braxton Hicks or bipolar version is very good if successfully performed, the operation is difficult and the infant mortality is high.

Packing; the pelvis must be packed tightly, it does not always control the hemorrhage and the danger of infection is increased.

Rupturing the membranes will sometimes temporarily arrest the hemorrhage until more rational treatment can be instituted.

#### DISCUSSION

DR. G. FRASER WILSON, (Charleston):

Placenta previa is a condition that we all pray we may never meet, and we meet it when we are least looking for it. We have

had three placenta previa cases in the last thirty days. If I had my way I would have every doctor in South Carolina write on the walls of his office that painless bleeding means placenta previa almost always. Just as soon as you realize that the woman must be delivered immediately—as soon as you make your diagnosis. The blood she loses plus the blood she must lose is more than sufficient to take her life.

There are many methods of attack in placenta previa. I agree with Doctor Wilson on Caesarean section. My results with Caesarean section in placenta previa are 100 per cent. for the child and almost as good for the mother. The more experience you have with placenta previa cases the better your results will be. I have not lost a placenta previa case in a year, and I must have had twelve or fourteen cases. As to the use of the bag, I have only used it two or three times. There is the danger of an accumulation of blood behind the bag as it comes out of the cervix, and must examine the woman every two or three minutes to be sure the bag is not coming through the cervix. Second, when the bag is ready to come through, take it out and go in and do a rapid podalic and put the forceps on. The life of the baby means absolutely nothing to me in the treatment of placenta previa.

In closing I want to tell you men that one of the results of placenta previa is operative injury of the cervix, strange as it may seem. You think the woman is going to bleed to death, but I want to correct that impression. She will not bleed to death unless you have a laceration because you have better contractions and retractions with placenta previa than almost any other condition after delivery that I know of. Fortunately, the uterine artery comes in above Bandl's ring and these women can be saved because the blood is cut off and they will not bleed. But if you do not wait until the cervix is dilated before you attempt to deliver the baby you will get a tear, and if you have a tear into these enormously dilated blood vessels you will not be able to control the hemorrhage.

Remember that painless bleeding means placenta previa. Also that every toxic pregnant woman is a possible bleeder and you will have a prematurely separating placenta. Practically all of these are associated with diagnostic symptoms, and they are very apt

to bleed. I believe there are more premature separations of the placenta than we have any idea of, and the important thing is not to lacerate the cervix in the treatment of placenta previa.

## BLOOD CHEMISTRY

*By C. C. Craft, M. D., Florence, S. C.*

The determination of the chemical composition of the blood, especially the non-protein fraction, was for many years very difficult and it is only in recent years that a body of American investigators have elaborated methods which have enabled us to get accurate data. Folin, Van Slyke, Benedict and Myers are mostly responsible for our present knowledge of blood chemistry and for the practical information which their methods have made available. They very early discovered that the determination of the non-protein nitrogen gave us very valuable data on just those conditions on which the older methods of blood examination gave little information. I refer especially to such constitutional conditions as nephritis, diabetes and gout.

In addition, however, the chemical blood examinations have given us data which has changed our viewpoint regarding such disorders as renal diabetes, infantile conditions such as tetany, diarrheal acidosis and in eclampsia, malignancy, pernicious anemia, disorders of the ductless glands and various urologic conditions.

Before we begin to discuss figures which are considered pathologic it might be well to state what we consider the normal findings for uric acid, urea nitrogen, creatinine and blood sugar. I purposely leave out the determination of the total non-protein nitrogen because, in my opinion, the determination of its individual components gives us more reliable information both in diagnosis and prognosis. Uric acid normally ranges from 2 to 3 mg. to 100 c. c. of blood, urea nitrogen from 12 to 15 mg. to 100 c. c.,

creatinine from 1 to 2 mg. to 100 c. c. and blood sugar from .09% to .12%. While it is difficult to draw an arbitrary line and say that all on one side is normal and on the other side is pathologic yet it is believed safe, when the blood is taken after a fourteen hour fast, (in the morning before breakfast) to regard a uric acid above 3.5 mg. to 100 c. c., urea nitrogen above 20 mg. to 100 c. c., creatinine above 2 mg. to 100 c. c. and a blood sugar of over 0.15% as definitely pathologic.

Having stated what we consider normal and pathologic findings let us turn our attention to those pathologic states where we expect blood chemistry to be of benefit to us either in diagnosis, prognosis or treatment. The first of these conditions I want to mention is.

## RENAL DIABETES

In this condition the blood sugar is perfectly normal and without a knowledge of the blood sugar the condition could never be diagnosed. The people afflicted with a harmless glycosuria are few in number yet if we depend entirely for our diagnosis of diabetes mellitus on an examination of the urine alone we are going to overlook even these few cases. In renal diabetes the point of sugar excretion is below the level of the normal blood sugar. There is no hyperglycemia. It should be noted that a mild glycosuria and often a slight hyperglycemia appear to be associated with parenchymatous nephritis. The hyperglycemia, however, is quite without influence on the glycosuria. Determination of the urea nitrogen of the blood, renal function test and glucose tolerance test will usually clear up the diagnosis. In this connection I recently worked on with my colleague Dr. Smyser, a very interesting case. This gentleman was admitted to the hospital for a minor operation. Routine urine examination revealed 2.0% of sugar. The morning after admission his urine was free of sugar and a blood sample taken at that time showed 0.22% of sugar. He was immediately given 100 grams of



glucose and the test ran as follows:

Time after ingestion glucose.

	Blood sugar	Urine sugar
One-half hour -----	0.21%	2.0%
One hour, -----	0.17%	2.9%
Two hours -----	0.15%	4.3%

Note that the highest blood sugar occurred when the urine was sugar free. Renal function test showed 49% of the dye eliminated at the end of two hours. Blood uric acid was 4.4 mg. to 100 c. c. of blood, urea nitrogen was normal. The chloride content of the blood was not determined in this case.

#### DIABETES MELLITUS

In this condition our examination is first directed to the determination of the blood sugar, although the alkali reserve, as indicated by the CO<sub>2</sub> of the blood may assume greater significance if the case is admitted with an advanced acidosis. Dr. Myers says, "In this disease the most important thing to remember is that the excretion of sugar by the kidney is simply one of the body's many factors of safety." The sugar cannot be utilized hence it must be gotten rid of. The condition to which our attention should be directed is the hyperglycemia and as the disease advances the excretion of sugar in the urine is not a safe criterion of this since the permeability of the kidney seems to be lowered. In early diabetes we notice a glycosuria when the sugar in the blood rises above 0.16 to 0.17% but in advanced cases, showing nephritic symptoms, blood sugar values as high as 0.3% may be noted before the appearance of glycosuria. If we neglect the determination of the blood sugar in our diabetics we cannot get the information we need either in diagnosis or treatment.

Our routine when a diabetic is admitted to the hospital is to find out as nearly as possible the diet the patient has been getting and with a knowledge of the amount of sugar being excreted a very rough idea of the patient's tolerance is obtained. The morning after admission, in the absence of contraindications, a glucose tolerance test is run and in a few selected cases I have given a second dose of glucose at the end

of the second hour to test if the pancreatic substances, mobilized by the first dose, were sufficient in quantity to prevent a second rise. The diastatic activity of the blood has also been determined in some cases but the results were not sufficiently uniform to give me much information. With the weight, height and sex of the patient known we figure the basal maintenance diet. By making use of the diabetic diet chart of the Mayo Clinic it is very easy to get the correct ketogenic-antiketogenic ratio. If the patient does not become sugar free on the basal maintenance diet in from three to five days the determination of the amount of sugar excreted in twenty-four hours gives us the data for regulating the dose of insulin. Fortunately, so far, we have been able to send all of our patients home, sugar free, without insulin but in some cases on a very restricted diet. The following characteristic cases from our series I think will be of interest.

Mr. D. M. was admitted to the hospital February 13, 1923. The next morning, after a fifteen hour fast, his blood sugar was 0.27%, urine sugar 4.35% acetone and diacetic acid negative. His blood and urine sugar rose in one-half hour after ingestion of 100 grams of glucose to 0.45% and 5.6% respectively where they remained until the end of the third hour. His blood diastatic activity was 28. He had no tolerance for carbohydrates, refused to take insulin, so I was forced to put him on practically a starvation diet and allow him to go home. He returned at monthly intervals until July 1923 but in spite of the fact that his urine remained sugar free his blood sugar was persistently above 0.2%. He lost much weight, was very weak and was much discouraged but he persisted in the treatment and in February 1924 his blood sugar was 0.13%. He is now able to eat sufficient to regain some of the lost weight and to give him strength for light work. The point I want to stress is this. Blood sugar determinations should be made on all diabetics at monthly intervals and our efforts should

be directed to bringing the blood sugar down to a normal level. I do not believe a diabetic is doing well when the blood sugar is persistently above 0.17%.

The other case I want to mention is Mrs. A. R. The morning after admission her blood sugar was 0.34%, urine sugar 3.33%, acetone four plus. One hour after ingestion of 100 grams of glucose the blood sugar was 0.54%, urine 3.33%, acetone negative. The second hour her blood sugar was 0.58%, urine 4.0%. At the end of the second hour I gave her 50 grams additional glucose. The third hour determination showed that the blood sugar had dropped to 0.53% but the urine sugar had risen to 5.0%. It will be noticed that the second dose of glucose caused no secondary rise in the blood sugar. I have no explanation for this but I have noticed that all of my patients who failed to show a second rise in the blood sugar following the extra glucose have proven to be very easy to get sugar free. Mrs. A. R. left the hospital in eighteen days on a diet more than sufficient to maintain her and her first trip back to the hospital revealed a normal blood sugar.

#### GOUT

In our experience the determination of the blood uric acid is of much benefit in the diagnosis of gout but only when taken into consideration with the clinical symptoms and other laboratory findings. A knowledge of the blood uric acid has been of most benefit to us in those cases complaining of indefinite pains where no focus of infection could be found to account for the symptoms. These patients go the rounds of the doctors, have perfectly good teeth pulled, normal tonsils removed, and I have in mind one lady who went to Hot Springs and returned without benefit. A blood chemical examination revealed a high uric acid and atophan and alkalis have given her complete relief. In those cases of pains in the joints or muscles, where infection is ruled out, a determination of the blood uric acid should not be neglected. Very soon after I became engaged in this line of work a

young physician consulted me for excruciating pains in the muscles of his back in the lumbar and sacral regions. His blood uric acid was 17.0 mg. to 100 c. c. of blood. Diet, atophan and alkalis gave him almost immediate relief although his uric acid did not return to normal for nearly three months.

#### PROSTATIC OBSTRUCTION

The blood urea nitrogen has been found to be a very valuable preoperative prognostic sign in these cases. Where the findings are 25 to 30 mg. to 100 c. c. the case should be operated on with caution. If the findings are above 30 mg to 100 c. c. renal involvement is indicated and the case is a poor operative risk. Some months ago we had two cases of prostatic obstruction admitted to the hospital in one week. The first case, a white man, had a blood urea nitrogen of 17.0 mg. to 100 c. c., was operated on and made an uneventful recovery. The urea nitrogen on the second case, a negro, was 68 mg. to 100 c. c. This patient died the fifth day after admission without operation.

#### NEPHRITIS

In comparing the partition of the non-protein nitrogenous constituents in the blood with the similar partition in the urine we note the following:

In the urine 85% is urea nitrogen.

In the blood 50% is urea nitrogen

In the urine 1.5% is uric acid

In the blood 2.0% is uric acid.

In the urine 5.0% is creatinine.

In the blood 2.0% is creatinine.

In the blood the percentage of uric acid nitrogen is greater than in the urine, the urea is definitely lower and the creatinine is very much lower. This comparison brings out the difference between the ability of the kidney to excrete uric acid on the one hand and urea and creatinine on the other. The kidney normally concentrates the creatinine 100 times, the urea 80 times, but the uric acid only 20 times. As the permeability of the kidney becomes lowered in conditions of renal insufficiency this becomes evident first by a retention of uric

acid, later by that of urea and lastly by that of creatinine. The creatinine is the most easily eliminated of these three nitrogenous waste products, uric acid is eliminated with most difficulty, while urea occupies an intermediate position. I think it is accepted that all cases of early chronic interstitial nephritis are accompanied by an appreciable rise in the blood uric acid but that the blood urea nitrogen can probably be taken as a safer sign of impaired kidney function. It is certainly true that the urea nitrogen falls within very narrow limits for perfectly healthy individuals. The creatinine being more easily eliminated by the kidney than either uric acid or urea does not begin to show an increase until the urea nitrogen has doubled or more than doubled. Creatinine figures of over 3.5 mg. indicate serious impairment while figures over 5.0 mg. means that no permanent improvement is to be hoped for. The exceptions to this rule are acute renal conditions and mild bichloride poisoning. I wish to refer to two characteristic cases which will illustrate the value of blood chemical findings in suspected nephritis.

On Dec. 17, 1922, Mr. J. W. D., 37 years old, was admitted to the hospital suffering with a slight paresis of the right arm. His systolic blood pressure was 214. Urine showed slight trace of albumin and a few hyaline casts. Blood chemistry findings were, uric acid 4.8 mg., urea nitrogen 37.2 mg. creatinine 5.5 mg. Excretion of dye in renal function test was 45% in two hours. On Dec. 25, 1922 his blood uric acid was 4.0 mg., urea nitrogen 32.8 mg. and creatinine 4.0 mg. which denotes definite temporary 'improvement. Jan. 27, 1923, 25% of the dye was excreted in two hours in the renal function test and his blood findings were as follows: Urea nitrogen 26.0 mg., creatinine 4.6 mg. He moved away in Feb., 1923, but I heard from him in Dec., 1923 and he had not improved. Judging from his blood findings I am sure he will make no permanent improvement and an

early fatal termination is to be expected in this case.

Mr. C. E. B. age 35, was admitted to the hospital Jan. 30, 1923 complaining of an occasional severe headache and high blood pressure. His systolic pressure was 240, urine examination showed trace of albumin and a very few hyaline and granular casts. The blood pressure in this case was higher than in the preceding and the urinary findings were about the same. Blood chemical examination in this case however gave normal findings showing that impaired kidney function could be excluded from consideration as a possible cause of his high blood pressure and headaches.

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#### OFFICE TREATMENT OF THE DISEASES OF THE ANUS AND RECTUM

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*By F. M. Durham, M. D., Columbia, S. C.*

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Medical Colleges of a few years ago had no trained men to teach ano-rectal pathology. The course was covered by one or two lectures from the chair of general surgery.

Young physicians graduated with only a vague idea of hemorrhoids and fistula. These were the only pathological conditions known to exist in this area, so far as the medical student knew. Most of them had never seen a proctoscope nor made a digital examination of the anus until after graduation.

Why have diseases of the anus and rectum been neglected?

(1) Medical students were not taught ano-rectal pathology. They were ignorant and were told that the hemorrhoid operation required a general anesthesia, the division of the sphincter and to the point of temporary paralysis, the thermocautery, locking of the bowels for several days, the packing of the anus with a large wad of gauze for a similar period of time. They

Read before the South Carolina Medical Association, Orangeburg, S. C., April 17, 1924.



were informed that this was one of the most painful of all operations.

(2) The laity also look upon all aches and pains in the anal region, and all discharge, such as mucus and blood, as being due to "piles".

(3) Anal and rectal examinations have always been repugnant and embarrassing to the patient and frequently so also to the examining physician.

(4) It is human nature to go the way of least resistance, and as a rule physicians obey natural laws as do other people. Rather than embarrass his patient, takes the patient's diagnosis of "piles." He writes a prescription for a "never failing pile ointment." The physician's conscience is soothed even if the poor patient's piles are not.

Hill, of Harvard, says, "It is not remarkable, therefore, that many otherwise skillful practitioners imagine numerous difficulties associated with the diagnosis of these cases, and, consequently, the treatment adopted by them, is, as a rule, almost entirely perfunctory, hap-hazard and unsatisfactory."

Bodkin says, "More serious mistakes—the result of slipshod examination—are made in the diagnosis of diseases of the rectum than in any other portion of the body."

This neglect of anal and rectal diseases by the regular physicians, and the embarrassment and repugnance of being examined by the patient has been responsible for the great prosperity of the irregular, unscrupulous and advertising quack.

Bodkin again says, "Rectal diseases have been treated in the past by unscrupulous and unlicensed pile doctors. Not having been considered a dignified branch of medicine or surgery, few cared to take up the study of such diseases, and but for the efforts of a few practitioners of unquestionable ability and reputation, these diseases would have been disregarded by, and almost unknown to the legitimate practitioners of medicine."

Since the perfection of the electrically lighted pneumatic proctoscope and the advent of local anesthesia by the use of novocain and quinine and urea, and the perfection of the injection treatment of hemorrhoids, by the use of quinine and urea, the office or ambulant treatment of diseases of the anus and rectum have attracted the attention of some of our best medical men. This neglected branch of medicine and surgery has at last been divorced from the mystery and secrecy which the irregular and unscrupulous advertising quacks have for a long time successfully mystified and deceived the public.

I think we are now safe in stating that after much waiting and watching a new specialty in medicine and surgery has been born, and has just been christened, "The Office or Ambulant Treatment of Diseases of the Anus and Rectum." It has been estimated that one person out of every five has some ano-rectal pathology. If fifty percent of this is amenable to office or ambulant treatment, the office proctologist should have no fear of dearth of work.

By the term office treatment, I mean to include all diseases of the anus and rectum that can be diagnosed and treated in the office of the physician, the home of the patient, or in a very short stay in the hospital, and all operative work to be done under local or sacral anaesthesia.

#### HOW TO EXAMINE THE ANO-RECTAL REGION

When the history of the patient indicates that he has been suffering from ano-rectal diseases, he should be undressed or clothes loosened, and placed on a table in the left lateral position and covered with a sheet. Then simply separate the buttocks and with the aid of a good light inspect the anus, perineum, buttocks and genitals. You see at once any discoloration, abrasion, eczema, cracks or eruption of the skin, discharges, such as mucus or blood, protrusion, such as external, thrombotic or protruding mixed hemorrhoids, anal fissures, posterior dimples, and fistulous openings, sometimes

so small as to be found with great difficulty. A blanched sodden appearance of the skin as in pruritus ani, a sentinel hemorrhoid as in chronic anal fissures and swelling as in perianal abscess. By palpation you are able to roll small fistulous tracts under your finger, which feel like small hard cords. Often they are easier to detect by palpation than by vision. All swelling and tender areas are located by palpation.

The digital examination should be made with the patient in the left lateral position, and he should be instructed to strain, as if at stool. The physician should have on a well fitting finger cot which has been previously lubricated. The finger should with great gentleness be inserted into the anus with a boring motion and with several twists of the wrist the whole anal mucosa is examined. If an ulcer or fissure should be present, press the sphincter on the opposite side of the ulcer. During the examination you should carefully note the force with which the sphincter clasps the finger. This muscle is small and its function is menial, but upon its integrity depends the foundation of society.

A hypertrophied or spasmodic sphincter usually means trouble higher up, a relaxed sphincter indicates constitutional diseases or the presence of large protruding hemorrhoids over a long period of time. While your finger is in the anus you feel whether the mucosa is soft and velvety, or are there indurations, elevations, depressions, such as are found in diseases of the columns or crypts of Morgagni, often malignant growths, strictures and polypus can be palpated.

Never think that internal hemorrhoids are absent because you cannot feel them. As a rule they cannot be palpated. (If the bowel is full of stool you should suspect chronic constipation or fecal impaction.) Often the internal opening of a fistulous tract can be palpated.

I shall not take time to describe the technique of the passage of the electrically lighted pneumatic proctoscope. The procto-

scopic examination should be no more painful than the digital examination. With the proctoscope we detect deviation from the normal higher up than can be palpated by digital exploration.

Through your protoscope you may see angulations, ulcers, malignant and benign growths, blood, mucus, bleeding or denuded areas, strictures, in fact anything pathological that may be present.

The stools and gastric juice should as a rule, always be examined chemically and microscopically in all cases of proctitis or sigmoiditis.

As time does not permit I shall mention only a few salient points that should be observed in the office treatment of ano-rectal diseases. The first, and most important is to be just as painless as is compatible with good work. This is accomplished by gentleness on the part of the physician, a knowledge of the nerve supply of the local anatomy, and experience in the administration of local anaesthesia.

The anal canal and the lower portion of the rectum are liberally supplied with sensory nerves which accounts for the severe pain caused by lesions in this area. While on the other hand the rectum is not supplied with sensory nerves especially in the upper half. The whole anal area can as a rule be anaesthetized by an anterior and posterior puncture with the hypo-needle and sufficient relaxation of the sphincter is obtained to permit of the pulling down and removal of internal hemorrhoids the incision or excision of a fissure an ulcer or any small growth.

Sacral Anesthesia is produced by injecting about 30 c. c. of a 1-4 percent solution of novocain into the sacral canal. Anesthesia coming on in about 20 to 30 minutes and lasting for two hours. Anesthesia is so complete and covers such a large area that perineal prostatectomy, fistula in ano above internal sphincter and hemorrhoids by thermocautery and complete sphincter divulsion can be done absolutely without pain.

It is a mistake to think that all anal and rectal disease require surgical treatment.

Quite a large percent of diseases of this region are best treated by the administration of drugs, by diet, and by local applications to the affected parts.

Since the perfection of the electrically lighted proctoscope local treatment is administered to the last ten inches of the large gut almost as easily and quite as efficiently and intelligently as to the throat or any other cavity of the body.

About 1-3 of all internal hemorrhoids can be relieved by the injection of quinine and urea. This is the best treatment for the so-called bleeding piles.

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#### DISCUSSION

DR. W. M. BEVIS, (Columbia):

I do not pretend to be an expert in this line, but I want to say in appreciation of Doctor Durham's paper that he has given us food for thought that we will do well to heed. Two points I desire to stress. First, is the importance of a thorough examination of the patient. I will emphasize this by an experience I had when I was in general practice. I was called to see a boy early in the night. His father had been raised in the mountains of Tennessee and was very emphatic in his language. I made a hurried examination as the pains were in the lower abdomen, and on digital examination I could feel something like a tiny ball. I wondered what I was up against, and finally I found the whole lower anal region was impacted with watermelon seeds, and with considerable washing out and digital curettage I relieved the situation.

The second point is the matter of spinal or caudal anaesthesia. This cannot be too strongly emphasized as the correct method in these cases. I remember once attempting to do a clamp and cautery operation on an old gentleman. The electrical instrument broke down and I was under the necessity of calling in a man who had a good soldering iron after I had given him spinal anaesthesia for the operation. When the old man saw the hot iron he was frightened, but I hid his face and the anaesthesia was so complete that he did not feel it.

DR. H. W. RICE, (Columbia):

I wondered why Doctor Durham asked me to discuss this subject. I am not a specialist of any kind. I belong to that fast-fading branch, the general practitioner, whose epitaph will soon be written. When I was a student there was but one specialty, and that was eye, ear, nose and throat. Recently we have had the rapid development of specialism, starting at the head, and now we have chest specialists, abdominal specialists, gastroenterologists and urologists, and now we come to specialists of the anus.

Seriously, I do not know any more about the subject than 99 out of 100 men know, but the development of illuminated instruments for various parts of the body has made it possible for a great many of us to be specialists who never could have been otherwise. The illuminated bronchoscope makes it possible for any physician to do more intelligent work, and perhaps the day will come when we will have specialists for every organ in the body.

DR. D. M. CROSSON, (Leesville):

I enjoyed the paper and think it is very important. He laid great stress on the examination of the rectum, and all I wish to do is to emphasize that point. I remember recently being called hurriedly to see a boy nine or ten years of age. They had had two or three physicians and they all said they could not do anything for him—that he was going to die. I went to work to try to find out what the trouble was, and in my examination I discovered the rectum full of gravels. He was a dirty little chap. I got a nurse to give him an enema of warm soap suds and we got out 147 gravels. For two or three days that child had suffered for lack of examination.

DR. J. R. YOUNG, (Anderson):

I want to emphasize what has been said about doing rectal operations in the office. For two or three years I have been doing hemorrhoid, fistula and other minor rectal operations under local anaesthesia, and for about a year and a half I have used epidural anaesthesia. I want to endorse what the doctor says as to the absolute necessity of that form of anaesthesia. You get an absolutely perfect anaesthesia and relaxation of the rectum. We have had about 10 per cent, of failures, but that is probably due to our technique. All we do then is to use a local



infiltration anaesthesia and go ahead. I think it is decidedly important for us to consider this from the economical standpoint if no other, because if you save a patient a good sized hospital bill you have rendered him your friend.

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DR. JOHN H. YOUNG, (Columbia):

I believe the fault lies in a lack of accurate knowledge of the disease of this part of the anatomy. I believe further that the medical schools should pay more attention to teaching the diseases of this region. I know I did not have a fair idea of it when I left school, and all I know is from my own experience and watching others. I have not studied along this line, but a great deal of this work could be done in the office and relieve the patient of a hospital bill. I think examinations in this part of the body should be thorough, and if the general practitioner is not satisfied with his own examination he should call in a specialist. Such conditions as congestion of the mucosa, which is one of the stages before the formation of hemorrhoids, might be relieved by treating the constipation, putting soothing oils into the bowels, or some of the skin tabs might be removed in the office. But of course for large hemorrhoids the hospital is the place because of the danger of hemorrhage.

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DR. F. M. DURHAM, (closing):

I just want to cite one or two cases I have seen that stress the fact that every patient

that has been treated for a good while and that seems an obscure case, should have proctoscopic examination. The first case was referred to me—a man who had amoebic dysentery in the Philippines during the Spanish-American war. He had had many hemorrhages. On examination by the proctoscope I found ulcers significant of amoebic dysentery. I put him on senna tea and high enemas, and he is a well man today. If that man had been proctoscoped he would have been cured as soon as he left the Army.

Another man had a blood pressure of about 200. He had had a thermo-cautery operation and ever since he had been constipated; had to take salts every day. I examined him and found a round stricture. In a month's time I had him dilated so that I could put two fingers in.

A woman was referred to me by a physician who thought she had a malignancy. I proctoscoped her and found nothing but an anal fissure, and when that was removed she immediately began to gain.

One of the best things I know of in proctitis is to pass a pneumatic proctoscope as far as it will go, put in two or three ounces of 10 to 20 per cent, argyrol, and then put the cap back on and blow it up, and then put a wad of cotton in and keep it there from three to twelve hours. I find that is one of the best treatments I know of.

I believe hemorrhoids are the result of proctitis. A lot of these cases if we just give them a treatment it will keep from having hemorrhoids.

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## A NEW CHAIR AT JEFFERSON MEDICAL COLLEGE

In recognition of the far reaching developments of bronchoscopy in the diagnosis and treatment of diseases of the lungs and of esophagoscopy and gastroscopy in the diagnosis and treatment of diseases of the esophagus and stomach, the Board of Trustees and Faculty of The Jefferson Medical College have created a new Chair to be known as the Department of Bronchoscopy and Esophagoscopy. Dr. Chevalier Jackson, formerly Professor of Laryngology in The Jefferson, has been elected to the Professorship of the new Department. Dr. Fielding O. Lewis has been elected to fill the Chair of Laryngology vacated by Dr. Jackson.

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## IS MODERN LIFE TOO STRENUOUS?

One out of every 123 persons in the United States is confined in an institution supported by the state because he is either mentally defective, dependent, criminal or delinquent, according to figures given in the September Hygeia, popular health magazine (Chicago).

"The fact that so large a part of our population does not meet the demands of society must inevitably arouse the question whether the strain of modern civilization is passing the limit of human endurance," it declares.

In regretting the large amount of juvenile delinquency, the magazine puts the blame on the lessening of intimate home ties, which formerly were the pride of American home life.

## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

Parents attribute most fevers occurring in their offspring to some dietary indiscretion constipation or teething. This should not occasion the least surprise for it is a well known fact that in many varied conditions the first symptoms are referable to the gastro-intestinal tract. Constipation is common in most ailments which begin with fever or vomiting. Further as few children are properly fed and many from time to time get hold of forbidden articles they are frequently the subject of a digestive upset. The teeth can be seen inbedded in the gum from the fourth or fifth month usually, and from then on for several years one who looks may see a tooth coming or just erupted. The ancient and common fallacy of confusing the effect for the cause as a secondary digestive disturbances; or jumping to the conclusion that what is apparent most easily must be the *fons et origo malorum* is quite pardonable in those unskilled in medicine. But it should be the constant aim of the physician to guard against so simple and dangerous an error. Nearly all doctors precede the examination by obtaining a history. This procedure makes matters easier but does have a disadvantage. Quite naturally it tends to create a prejudice. At times where there is a history of injudicious eating one stops at that, failing to realize that this may not be the sole etiologic factor or may not have a bearing at all. Again and again a child develops an otitis, a tonsilitis, or perhaps a pyelitis and the first symptoms being fever and vomiting, a history of bad feeding is obtained. This seems to provide sufficient cause for the attack, fits in with the family diagnosis and saves work for the doctor. Everybody is well satisfied. The family are pleased that matters are no worse and a good prognosis is given. It appears

but right and proper that a purgative as calomel or oil should be ordered. The symptoms may however not abate, and on the following day the little patient is worse. A further cleaning out is given, which does not help. In fact the loss of water from the tissues has done harm. It sometimes unfortunately happens that for 3 or 4 days all thought is put on elimination and none on examination until some rather obvious sign as an eruption, a discharging ear, or purulent urine is forced on the attention. While of course a complete physical examination should be made at the first visit and given just as much weight as the history, yet it is by means infrequent for the examination to show nothing of a positive nature. A diagnosis often cannot be made at once or if made is purely tentative. A consolidation cannot always be found early, and having been found may resolve and give place to an entirely different chest finding as, for instance a pleuritic effusion. It is therefore only right that when we acquiesce in the diagnosis of an acute digestive upset, it should be with the mental reservation that we are going to search further and we reserve the right to change our opinion. While an initial physical examination is made by most doctors yet too few follow up the case by repeating the process in whole or part, forgetting that diseases progress, and that signs come and go. It has been shown by many workers that the vast majority of our errors are due to lack of careful repeated examination rather than to ignorance of the science. Laziness or insufficient time causes our downfall more often than lack of sense or training.

In short; history is always of value, but its importance must not be over estimated, and to properly look after the sick child requires that the attending physician must give sufficient of his time and energy.

## SOCIETY REPORTS

### RIDGE MEDICAL ASSOCIATION MEETS

The Ridge Medical Association met in the Leesville Infirmary, Monday evening. The attendance was larger than usual. Drs. Harman and Pitts of Columbia met with the association, and participated in the discussions to the delight and edification of all. Drs. W. P. Timmerman and James Crosson, each presented a patient for a clinic. Dr. R. H. Timmerman read a paper on pyorrhea in which was given the latest opinions on this disease. This paper was discussed by Drs. Pitts, Harmon, Ridgell and W. P. Timmerman. A general discussion on medicines was participated in freely by the members. Supper was announced at this time and the members were invited into the dining room, where a beautiful and tempting feast was spread. The efficient and pleasant nurses saw that each one was well served. The association tendered a vote of thanks to the Infirmary for the use of their building, the supper furnished and the nurses' courtesies, a vote of thanks was also extended Drs. Harmon and Pitts for their very instructive discussions on the various subjects. The association voted Drs. W. T. Gibson special thanks for his splendid address in the Christian Church, the fifth Sunday night in August, to the citizens of

Batesburg. This meeting was without doubt one of the most successful and enjoyable held.

The association adjourned to meet October 20th in Dr. W. P. Timmerman's office.

### FOURTH DISTRICT MEETING

On September 16th, the Fourth District Medical Society held its 18th annual meeting in Anderson at the Country Club. In spite of very bad weather the attendance was unusually large, 86 members registering and all but two of the papers on the program were read by their authors. Some of the papers elicited a great deal of discussion and showed a lively interest of the members in these subjects. The Anderson County Medical Society provided a sumptuous dinner which was served in the dining room and porch of the Club house and the visiting physicians showed their appreciation and enjoyment of this feature of the meeting. The officers elected for the ensuing year are:

President, Dr. B. A. Henry, Anderson; Vice-President, Dr. W. R. Dendy, Pelzer; Secretary-Treasurer, Dr. L. Rosa H. Gantt, Spartanburg.

The executive committee will decide on the place for next meeting.

L. Rosa H. Gantt, Sec'y.-Treas.

### DOCTORS HEALTHIER THAN LAYMEN

That doctors practice what they preach, subconsciously at least, is shown by recent physical examination submitted to by members of the Kings County Medical Society in Brooklyn, New York. The ninety-one doctors who were given personal health examinations were found to be in better general health than other members of the community of corresponding age, says Hygeia, popular health magazine (Chicago), in its September issue.

The reason for this superiority is thought

to be in the fact that physicians less frequently have bad conditions within the mouth and less constipation than the general public. Their blood pressure too was lower than the laymen of corresponding age.

Says Hygeia: "The general conclusion reached that physicians, despite irregular hours of work, irregular routine in life as to meals and sleep, and less systematic exercise and recreation than are usually considered advisable, must achieve their good health by, subconsciously at least, practicing what they preach."



## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

**HERNIA FOLLOWING APPENDECTOMY.**—The usual causes of this hernia are post-operative suppuration in the abdominal wall; the use of drains that are larger than necessary; a faulty closure of the muscle and fascia layers; the division of nerves supplying the muscles; and the use of the wrong incision. The McBurney incision gives the lowest percentage of postoperative hernias.

An elliptical incision should be used if the sac is thin and adherent to the skin; if the sac is not adherent, a vertical incision saves time. Nothing is gained by opening the fundus—the adhesions here often make it difficult or impossible to reach the neck of sac—and time is saved by beginning the dissection at the neck and working inward. The author found that the simplest method of exposing the hernial opening is to invert the sac on one or two fingers, and feel the sharp fascial edge which is unusually most distinct on the outer side of the hernia near Poupart's ligament. With the finger as a guide, the incision is made directly down to the fascia. The abdominal wall should be reconstructed as well as possible; and the muscles and fascia used as a single flap which is brought down and broadly overlapped by a second flap secured below from the ex-

ternal oblique aponeurosis.—Leigh F. Watson: Chicago Medical Recorder March, 1924.

**PREVENTION OF POSTOPERATIVE HERNIA.**—A muscle-splitting incision should be used when possible. In long incisions muscle fibres must not be sacrificed needlessly, and the motor nerves must be saved. The fascia is the strongest structure in the abdominal wall and it is very essential to close it properly. It is frequently undertension and unites more slowly than muscle tissue; for this reason it is necessary to overlap each layer separately. When closure under tension is unavoidable, the patient's shoulders should be kept in a semi-reclining position and the knees elevated on pillows (the "jack-knife" position) for a week after operation. Tension or stay-sutures are valuable to prevent strain on the fascia stitches. A gain in weight after operation, especially in obese subjects, should be avoided because it increases intraabdominal tension and weakens the abdominal wall. The use of an elastic belt checks the tendency to rapid accumulation of fat.—Leigh F. Watson: Northwest Medicine, April, 1924.

### A REVIEW OF ONE HUNDRED CASES OF CARCINOMA OF THE CERVIX

The report made by Lawrence A. Pomeroy and Abraham Strauss, Cleveland (Journal A. M. A., Oct. 4, 1924), is based on 100 consecutive cases of carcinoma of the cervix in patients applying for radium treatment. The special purpose of the study of this series of cases was to find out whether the microscopic examination of tissue removed at the time of the original examination or treatment would enable one to make a prognosis with

accuracy. The best results from treatment were obtained in the spinal cell type with pearls and in the adenocarcinomas. A rather surprising feature of these results is the large proportion of palliations, 71 per cent., obtained in the transitional type for the six month period, and the rapid decrease of this percentage in the other periods. This suggests that the cells of this group may be quite sensitive to radium, and brings up the question of the advisability of repeating the irradiation in even apparently quiescent cases of this group.

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

### RADIUM IN TREATMENT OF CANCER OF THE EYE

If a cancer of the conjunctiva and cornea is properly removed with destruction of the base of origin, permanent cure results, but there is such an appreciable element of unsuccess as to make one desire better methods of treatment. The following summary given in the American Journal of Ophthalmology, August 1924, page 594 of radium treatment of these conditions is therefore of interest.

"Epidermoid carcinoma of the conjunctiva is a local disease, restrained in its growth by the fibrous outer layer of the eyeball.

Surgery usually fails to cure and actually assists the local and regional spread of the disease.

Radium therapy gives promise of being a curative agent in cases not involving intrinsic ocular structures. When perforation

has occurred, a combination of surgery and radium is indicated.

Evidence is accumulating which makes it appear that heavily filtered radiation may produce opacities in the lens. Unfiltered radiation is therefore the agent of choice."

I have recently had Dr. Robt. Taft to use it. The condition is at present completely well, but only about two months have elapsed since the complete disappearance of the growth.

Last year and again this year, I have seen an osteo-sarcoma of great extent of both orbits arising from the nose. That has not yielded to X-Ray or radium, nor does the present day literature promise help for this type of growth. But cancers of the conjunctiva, cornea and lids are sufficiently common and severe in their course for us to use and want the help of radium, guarding the application of it so as not to cause lens opacity or optic nerve atrophy.

### AMOUNT OF BLOOD LOST DURING SOME OF THE MORE COMMON OPERATIONS

The amount of blood lost in a series of operations has been determined by W. D. Gatch and W. D. Little, Indianapolis (Journal A. M. A., Oct. 4, 1924). Colorimetric means were employed. To test the accuracy of the method, some preliminary experiments on animals were carried out. In these it was determined how accurately a known loss of blood could be estimated. Thirty estimations have been carried out. A consideration of the results is extremely instructive. They show that the loss of blood in ordinary laparotomies is insignificant. Even in radical gastrectomy for carcinoma, the loss was only 232 c. c. They also show that in operations other than laparotomies, the loss is much greater. In a case of laminectomy for fracture of the spine in which 672 c. c. was lost, a large part of the blood was already extravasated at the site of injury. In a case of radical excision of the breast, pectoral muscles and axillary glands for carcinoma, 710 c. c.

was lost. This case shows the very considerable loss of blood that may be masked by the use of gauze packs instead of being stopped by them. These results show also that a patient in fairly good physical condition may lose from 600 to 700 c. c. of blood without any apparent harmful effect on the general condition or the postoperative course. An adult in good health does not manifest serious effects from hemorrhage until the amount of blood lost is between 800 and 1,000 c. c. It would seem that when a patient requires a transfusion because of hemorrhage or anemia, the amount of blood given to be of much benefit should be rather large—at least 600 or 700 c. c. In desperate cases to save lives, two donors should be used and from 1,200 to 1,500 c. c. of blood given. Occasionally it may be wise to give even more than this—say from 2,500 to 3,000 c. c. in the purpuras or conditions with bleeding tendency. Operative or traumatic hemorrhage will probably be fatal before indication for such large amounts would arise.

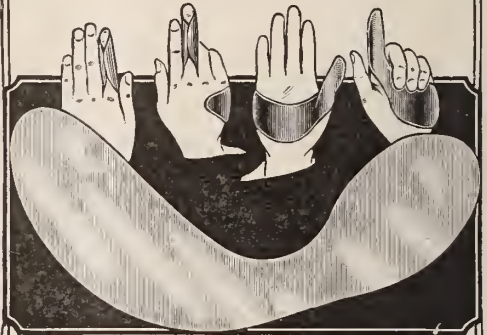
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Dr. J. Rosslyn Earp, director of the department of hygiene at Antioch College, writes of the modern plan of health education carried out there in the October *Hygeria*, popular health magazine published by the American Medical Association.

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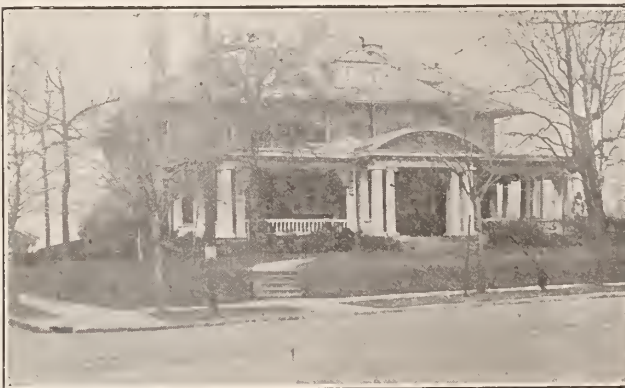
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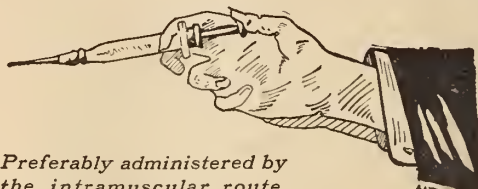
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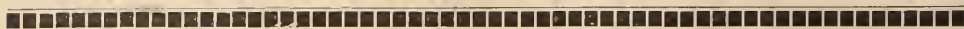
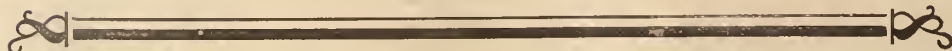


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*(Stokes and Behn, Jour. A.M.A., July 26, 1924, p. 245.)*



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# The Journal

OF THE

## South Carolina Medical Association

VOL. XX.

GREENVILLE, S. C., NOVEMBER, 1924

NO. 11

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## EDITORIAL

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CHARLESTON, S. C., NOV. 18TH, 1924.

Dr. E. A. Hines, Editor,

The Journal South Carolina Medical Association, Seneca, S. C.

A teacher in the College for more than a third of its life, the Centennial Celebration left impressions that give me pleasure to express. Its various features were admirably managed and co-ordinated from educational, sentimental and practical viewpoints; its conception and execution showed marked efficiency and ability in the departments of medicine, pharmacy and nursing, and its consummation reflected great credit on all who put heart, hand and brain in making it a wonderful success.

The tableaux drafted from the faculty, students and nurses enough histrionic talent to win, under the artistic direction of Mr.

Jennings, unusual public commendation. The Clinics were well managed and attended; the meeting of Pharmacists and the lunch, with nurses assisting, were most enjoyable; the ceremonies incident to the memorial tablet were dignified and graceful; the reception at the Museum unique, and the banquet a brilliant function. The members of the faculty, whenever and wherever participating, showed engaging personality and gifts of expression that measured fully up to those of our distinguished guests.

In enthusiasm and pride, our non alumni colleagues, whose lives have not been so intimately associated with the history and fortunes of the College, were invaluable.

In each and all of the features attending the observance of our hundredth anniver-

sary, Dr. Wilson's abilities and tireless interest were conspicuous. If these compliments are Bromidian, then, our birthday presents, of public recognition, budding Alumni pride and spirit, higher mutual esteem and co-operation and greater confidence in a brighter future, are meaningless.

Sincerely,

Edward F. Parker.

---

### MEDICAL COLLEGE CENTENNIAL A GREAT SUCCESS

---

As was predicted by many friends of the Medical College of the State of South Carolina the plans for celebrating the One Hundredth Anniversary of the founding of the college were remarkably successful. The attendance was good from South Carolina and other states. The tableaux presenting the history of medicine and the wonderful achievements of science in the amelioration of human suffering proved to be of extraordinary interest not only to medical men but to the citizens of Charleston. The Academy of Music on this occasion was crowded far beyond seating capacity. The characters in the presentation were represented by members of the local profession led by Dean Robert Wilson. The unveiling in the college library of a tablet to the memory of Dr. F. L. Parker, former Dean, by the class of 1900 was indeed a tribute which will be approved heartily by the profession of South Carolina and the South. A masterly oration was delivered by Dr. Frank Lander of Williamston. The tablet was unveiled by a grandson of Dr. Parker. Thousands of students all over the country will rejoice with the class of 1900 in the perpetuation by such a beautiful tablet of the memory of the Professor of Anatomy and Diseases of the Eye, Ear, Nose and Throat, whose lectures were always both entertaining and instructive. Many of the features of the Centennial were enjoyed by all of the visitors. The clinics for instance were admirably conducted.

Inspection of the College and Roper Hospital proved to be a revelation to many visitors.

The School of Pharmacy as well as the School of Medicine has made wonderful strides, and likewise the School of nursing.

The strategic location of all of these buildings and schools on the same grounds is a unique distinction of wonderful practical value in the education of young men and women in the professions of medicine, pharmacy and nursing.

The centennial banquet at the magnificent Francis Marion Hotel was a brilliant affair, never surpassed we believe in the annals of medicine in South Carolina.

The tributes paid by Presidents of Colleges and representatives from the various government services and other distinguished men of the State and national life of the country were indeed historic and to the highest degree complimentary of the college.

The entertainments provided by the college and the students were delightful in every detail.

There would appear to be every reason for the State to greatly enlarge this splendid institution and we believe that it will do so.

The medical profession of South Carolina should stand solidly behind the whole proposition.

There is no longer any real necessity to send our students outside of the State for a first class medical education, however, desirable it may be to do so for additional post-graduate instruction.

---

### THE SECRETARY-EDITOR'S CONFERENCE, CHICAGO

---

The annual conference of Secretaries, Editors and Presidents of State Medical Associations, held in Chicago, November 21st, 22nd, proved to be the most instructive and interesting get together of officials of State Medical Associations of any held hitherto. These conferences meeting jointly with the officers of the American Medical



Association in the magnificent headquarters building gives an unusual opportunity to the man in the field to observe the workings of this greatest of all medical organizations.

By close contact with his fellow-workers in organized medicine he returns to his home inspired with newer ideals for his own organization.

It was clearly evident at this meeting that the A. M. A. is firmly convinced that the physician in the smaller communities in the United States should be brought into closer relationship to the advances of modern medicine and surgery. To this end one important development is promised in the way of taking post-graduate instruction to the medical man in isolated districts. Further details of this plan will be published later.

Ways and means for making the success of the general practitioner's field of service more attractive was discussed by numerous participants in the conference. Periodic health examinations were stressed by several speakers and all agreed that this work should be done by the family physician.

Dr. W. D. Haggard, President Elect of the American Medical Association, made a stirring appeal for "dry clinics" to become a part of the program of the County and State Medical Societies in contra distinction to purely surgical clinics of an operative nature in which few could see the details of the operation. Dr. Frank Billings urged that pathology and physiology be more frequently provided for at all society meetings.

It was brought out that a committee of the A. M. A. is now engaged in rewriting the model State Constitution and By-Laws which will be ready for report in 1925.

The entire conference went on record by

a standing vote as being in accord with the idea of more concentrated efforts towards a unification of all of the interests of the A. M. A. and the constituent societies.

The Board of Trustees announced the election of Dr. Olin West to become General Manager of the A. M. A. and Dr. Morris Fishbein to become Editor-in-Chief of the American Medical Association Journal, both of these offices having been held by Dr. George H. Simmons, recently retired at his own request.

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#### DEATH OF DR. J. J. WATSON

---

In the death of Dr. Joseph J. Watson of Columbia the South Carolina Medical Association has lost one of its most eminent practitioners of internal medicine. Dr. Watson impressed all who came in contact with him as being far above the average as a diagnostician. He was energetic to a superlative degree. In his earlier years he contributed much to the study of pellegra. He held various positions of honor among which was his membership on the State Board of Medical Examiners. Dr. Watson died October 16th.

---

#### DEATH OF DR. R. A. MARSH

---

Dr. R. A. Marsh of Edgefield died suddenly October 26th. He was a most lovable character, popular with the profession and with his clientele. Dr. Marsh was a loyal supporter of organized medicine. He was one of the very best District Secretaries in the State and had occupied the chair as President of his District Society. For a number of years he had rendered conspicuous service as a member of the Executive Committee of the State Board of Health.

## ORIGINAL ARTICLES

### AN EPIDEMIC OF GASTRO-INTESTINAL MANIFESTATIONS AT KINGSTREE

*By R. W. Sease, M. D., Kingstree.*

Mr. President and members of the State Medical Association, it is indeed an honor as well as a pleasure to be here to present a few facts for your thought and discussion on a recent Epidemic with Gastro-intestinal manifestations which occurred at Kingstree. The data here presented for your consideration is somewhat incomplete, but I hope sufficient enough to warrant its presentation.

This disease, I understand, was not altogether a local thing for there were other cases from other parts of the state but from all accounts that can be gathered, undoubtedly the conditions were dissimilar to a more or less degree, certainly in severity and in regards to the number of cases, for nowhere do we see where there has been more than twenty-five to thirty cases at any one place, while at Kingstree and surrounding community with a population of from four to five thousand there were approximately 175 to 200 cases during the month of February.

It was along about the first of the month that a few cases were noted and within a very short time the number increased from a few to many and apparently those coming in contact with the disease were more liable to the condition as will be shown later, and regardless of age, size, or sex for it appears that all were susceptible to it, though the younger the person the more severe the condition as well as the longer the duration.

Read before the State Medical Association, Orangeburg, S. C., April 17, 1924.

All being affected alike the first thing noted was a gastritis followed by a diarrhea in a very short time and then an extreme thirst, all of which persisted and grew more severe as the disease progressed, lasting from three to five days unless fatal in which case death followed in from eighteen to thirty-six hours. It always began suddenly with a non-projectile vomiting without any prodromal symptoms whatsoever. If an adult perhaps at work or a child while at play and in a very short while diarrhea would start, the first few bowel movements would be normal while later clear and very watery with an occasional mucous thread and at no time could blood be found, having from twenty to sixty of these watery movements in twenty-four hours which naturally dehydrated the patients very rapidly. Also with each bowel movement there would be large amounts of flatus expelled. Extreme thirst followed soon and these patients, if allowed, would drink water incessantly to be vomited immediately.

Very few of these patients ever complained of any pain but occasionally an adult would complain of griping pains in the abdomen with a generalized abdominal soreness, but no straining or tenesmus at any time. No temperature or perhaps a fraction of a degree could be found occasionally, while pulse and respirations were always found within normal limits. No delirium noted in any patient and mind always clear even in fatal cases, up to a short while before death. Only a few complained of headache. All reflexes were normal but a few cases developed Tetany beginning a short while before death. Another fatal case which no doctor saw and died within eight hours did not give a history of Tetany but did give a history of marked Gastro-

enteritis. As a rule the abdomen was moderately distended and some cases rather markedly so, with the expulsion of large quantities of gas.

The patients all complained of complete prostration which began in only a very short time after the vomiting began and lasted even after convalescing..

There were by far more children affected than adults and in the majority of children the ages ranged from two to six years, though others were affected ranging from seventeen months old up to eighty-four years of age in adults. Practically always the patients gave a good past history and in only a very few cases did this Gastro-intestinal manifestation follow another disease. A fact worth while to mention was that just previous to and during this epidemic there was an epidemic of measles but apparently these two conditions were not associated with each other. As a rule the condition was more severe with the more robust type of patient and strange to say all the fatal cases (four in number) were of this type and none of which even gave a history of any sickness during their previous life.

Laboratory findings did not give any valuable information for in those cases in which such was done there was perhaps a very slight leucocytosis of the blood with a differential count of white cells within normal limits although the Polys were occasionally found to be slightly elevated. Urine showed no appreciable change—albumin being found in small amounts in few cases but at no time could casts be found. In the more severe types in children there could be found acetone and diacetic acid but as a rule not to a marked degree. Sometimes a few red blood cells as well as pus cells could be found but not enough in numbers to indicate any pathological condition. The feces on routine examination did not reveal anything unusual and a cultured specimen showed the usual bacterial flora with no suggestion of a foreign bacteria.

Report of a few cases in spreading is worth while to mention for in one family a child age seventeen months was taken sick and in only thirty-six hours its mother became ill after which a trained nurse was secured and upon nursing these two patients for four to five days she became sick. Then a sister of the mother began to care for them and after one day's nursing she became ill. There were three adults in this home who did not get sick. In another family a boy aged eighteen months was taken sick on Monday afternoon and on Tuesday about midday his brother aged about two and one-half years became sick, both dying before day on Wednesday morning—one being sick about thirty-six hours and the other about eighteen, then on Thursday the Father was taken sick in the same way but less severe for the symptoms were not so pronounced except the extreme thirst, while in this family there was a child about three and one-half years old and the mother who did not develop the condition. Then in another home, and this a Physician's home, the Doctor was taken sick while paying a call and had to return to his home. In a few days his mother was taken sick followed in a day or two by his wife and a little later a seamstress who was there had to go to her home on account of being sick. All four of these cases were very severe, lasting longer than the usual adult case and one had typical Tetany which lasted for from six to eight hours. There were four children in this home and none developed the condition. In one other home where an adult had the same thing a neighbor who was kind enough to come in to render aid in nursing and cooking became sick after which she went home and some of her children developed it. In both of these homes there were cases in both children and adults, however, we must not fail to mention the fact that in some homes where there were children and adults there would be only one case.



## DISCUSSION

DR. T. R. LITTLEJOHN, (Sumter):

I want to congratulate Doctor Sease on reporting this most remarkable condition in the way he has. As I understand it, he did some autopsies and they did not show anything. I do not know of anything that has caused more alarm around where I practice than these conditions at Kingstree. Every home I would go into the mother would try to get me to tell what I thought was the matter with the children—if it might be acidosis. I told them I did not think it was, that acidosis was a symptom and not a disease.

I hope they will not have any more of these epidemics and I want to congratulate Doctor Sease on the way in which he has worked up his cases.

DR. R. M. POLLITZER, (Charleston):

I want to express my appreciation of Doctor Sease's contribution. It is most unfortunate that we have nothing definite in the way of diagnosis, but it certainly looks from his description as though it was a rapidly fatal infection and that the cases died from dehydration, and that early means of relief of that would be the most successful method of attack.

DR. A. L. BALLENGER, (Wagener):

There were several similar cases at Wagener just after the epidemic at Kingstree. A post was done on one of these cases but no diagnosis made. There was hemorrhage into the kidney, liver and spleen—profuse hemorrhage throughout all the organs. No diagnosis was made, but the report was that the cases at Wagener and at Kingstree were very similar, at least clinically, and so far as I know that was the only postmortem done.

DR. R. W. SEASE, (closing):

With reference to the autopsy, we had permission to hold an autopsy on two of the bodies, and we got a pathologist to come over from Charleston, but unfortunately we did not find out that these bodies had been embalmed until after the pathologist had left Charleston. He came and said that possibly the autopsy would not have revealed anything whatsoever. The other case I mentioned, the negro child that lived only eight hours, we perhaps could have gotten permission to hold a post on that child but for the fact that the father had come up to see about an undertaker and he was scared to death and we could

not get a definite history. He told me that the child did not have symptoms of gastroenteritis. However, on talking to the mother later we found that it did have typical gastroenteritis symptoms. Had we gotten a post on that body we might have found something. We may get a report from the State Board of Health with reference to the cases at Wagener. We asked for help thinking we would get an epidemiologist, but we were unable to find out anything at all after appealing to the State Board of Health.

## SOME CONSIDERATIONS IN THE TREATMENT OF APPENDICITIS

*By William Buck Sparkman, M. D., Greenville, S. C.*

Perhaps as much has been written concerning the appendix, its affections, and their treatment as any organ in the body so one should hesitate to choose as the subject of a paper a theme that might well be called prosaic and about which much has been said that has become hackneyed. Nevertheless, the fact remains that the appendix is the source of more potential danger to the individual than any other portion of the human anatomy and disease of it responsible for more morbidity and mortality than any other organ in the abdominal cavity, so it may be that even a repetition of some of the things which have been said before may help to impress us more forcibly with the importance of the condition even though no new light be shed thereon. This is apt to be true for it is not uncommon to hear from men not doing surgery such expressions as: "Taking out an appendix is as easy as falling off a log" or "Even I would not hesitate to tackle an appendix though I do no surgery at all." Granted that the removal of a simple appendix requires no particular amount of skill; but who can say before the incision is made that the appendix will bob up into the wound? There are cases which

Read before the Fourth District Medical Meeting, Anderson, S. C., September 16, 1924.

require the most consummate skill and the rarest judgment if the patient is to be restored to permanent health. It is to some of such cases particularly that I wish to address my remarks.

The facility with which any operation is performed, and the thoroughness of it, depends upon several mechanical factors among which are the size and position of the organ to be operated on, its approach, and the exposure secured. Not only does the patient's recovery depend on these factors to a large extent but also the duration of the disability and the consequent expense (which takes in also the liability to the necessity for secondary operation), two items of importance secondary only to his ultimate recovery. If by choosing a method we may be able to discharge our patient earlier, feeling that the work has been thoroughly done, then it is our duty to handle the case just that way.

The successful management of the diseased appendix depends, first, upon the method of approach. Everyone knows that there are a number of conditions affecting the appendix which necessitate a wide exposure if they are to be handled properly and that it is impossible to say whether or not they exist until the operation. One may suspect them from the symptoms but one can never be certain, therefore it is best to make the approach in all cases in such manner as will enable one to enlarge the opening sufficiently to do whatever is necessary. To my mind the only incision which fulfills these requirements is the right rectus. The McBurney incision is used quite extensively and if one can be sure that he has no structural abnormality with which to deal it answers the purpose well, though I do not believe that there is less liability to hernia where the gridiron incision is used. The amount of exposure which can be secured without cutting the muscles, however, is limited and it is not at all unusual to get into a case which requires more space than is to be had

with this incision. It does not make any difference who the operator is; the amount of exposure is determined by the structure of the abdominal wall. For instance, I think that it is impossible in a retro-peritoneal appendix to secure enough exposure to handle the condition adequately through this incision. Even where the organ is not, strictly speaking, retro-peritoneal but is plastered down retro-ecally it is exceedingly difficult to handle. Many such appendices are simply dug out of their beds with little or no attention to hemostasis and the operator takes a chance at their not bleeding because he has not enough room in which to attend to all the details as they should be. Not only this but the conditions may be such that an appendix which is intra-peritoneal may be the cause of a retro-peritoneal abscess on account of the arrangement of adhesions or through perforation into the meso-appendix. Such cases are not to be cared for adequately through a McBurney incision.

So much for the method of approach. I wish now to consider briefly the further treatment of retro-peritoneal appendices which occur, according to Deaver, in 2 per cent of cases. While the base of the appendix is constant in its relation to the caecum, the process may occupy various positions. It may pass upward and to the left in the so-called splenic position. When it is retro-peritoneal in this position, it may lie behind or within the root of the enteric mesentery. It can occupy the anterior position only when it has a mesentery. The appendix very frequently takes up a position behind the caecum and then its relation to the peritoneum varies. It may or may not be retro-peritoneal. In cases where the caecum is not covered by peritoneum posteriorly, the retro-caecal appendix lies in contact with the iliac fascia and is in contact with peritoneum only at its base. Where abscess occurs in this situation it is located in the extra-peritoneal fat. The caecum is thrust forward. A diag-

nostic point worth keeping in mind here is that a tympanic note is elicited on percussion which may be misleading unless the possibility of extra-peritoneal abscess is kept in mind. The appendix may be extra-peritoneal or extra-peritoneal abscess result where the posterior wall of the caecum is not covered or even where this is surrounded by peritoneum, the appendix being folded back between the peritoneum and the caecum. Also in undescended caecum the appendix is extra-peritoneal except at the tip which lies in front of the kidney in the posterior wall of the hepato-renal recess.

To my mind there is no choice of proper procedures in these cases. There is only one way in which they may be handled properly. The exposure must be wide and even where there has been no abscess formation drainage must be provided for through a stab wound in the flank. The ability of the peritoneum to take care of infection is common knowledge. Likewise it is well known that the loose, cellular tissue lying behind the peritoneum is ideal for the propagation of micro-organisms and the spread of infection. When, therefore, a retro-peritoneal appendix is removed drainage should be provided for if one wishes to obviate abscess formation with all the possibilities of infection in this location, not the least of which are peri-nephritic and sub-phrenic abscess or empyema and abscess of the lung. I have seen these things develop and so, perhaps, have you. You will see it again if this retro-peritoneal space is not drained because there is no sero-serous apposition about the stump of the appendix and the areolar tissue there will not take care of infection. The posterior parietal peritoneum must be opened to remove the appendix but closure of this after the removal of the organ cannot control infection except to keep it retro-peritoneal. As a matter of fact, with the removal of such an appendix the case becomes analagous to a wound in the ascending colon, posteriorly, which never requires suture, but simply,

adequate drainage. However, it requires only a moment to tie off such a stump and there is a possibility that the patient's natural resistance will take care of the infection so that I, of course, do not advocate leaving the stump open.

To summarize: Button-hole incisions may be excellent from a cosmetic standpoint, but a right rectus incision best enables one to deal with the exigencies of appendicectomy.

The proper handling of any case depends upon the relation of the organ to the peritoneum. If we want to avoid the embarrassment of a secondary operation, perhaps performed by someone else, and save the patient the loss of time and the expense of same, always provide for drainage where the appendix stump cannot be closed in with peritoneum as is the case in two out of every hundred.

References: Appendicitis, its Diagnosis and Treatment, Jno. B. Deaver. Manual of Surgical Anatomy, Beesly and Johnston.

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### SIGNIFICANCE OF GASTRIC HEMORRHAGE

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*By A. E. Baker, M. D., Charleston, S. C.*

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This subject is of special interest because of the varied pathology which may be the etiology of gastric hemorrhage. At times it is a most difficult problem to make a differential diagnosis, as to the origin of the bleeding; so often the pathology is outside of the stomach with no history or symptoms to indicate the tissue involved. Even the X-Ray and Laboratory may fail to be of any assistance. Later I will report a case to emphasize this condition.

Reviewing the literature on this subject we find that 75 per cent of these hemorrhages are extra-gastric and 25 per cent are intra-gastric. In considering causes of these hemorrhages, I shall not attempt to enum-

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erate all the diseases which may be associated with gastric hemorrhage or the condition under which it may occur. A partial list will suffice to emphasize the variety of causes and to serve as a basis for this discussion.

The principal causes of intra-gastric hemorrhage may be ulcer, cancer, syphilis, tuberculosis, erosion of the gastric mucosa, benign tumors and foreign bodies. The pathology outside of the stomach causing extra-gastric hemorrhage, may be, duodenal ulcer, cirrhosis of the liver, diseases of the spleen, especially splenic anemia, diseases of the gall-bladder, biliary ducts, pancreas, appendix, cardiac and pulmonary diseases, nephritis and acute febrile diseases.

We find that gastric ulcer is considered the most common cause of bleeding from intra-gastric lesions, according to statistics on gastric and duodenal ulcer hemorrhages occur in about 40 per cent of cases. The bleeding from these ulcers varies greatly in frequency, quantity and duration. "A single hemorrhage may be fatal, or repeated small hemorrhages of no immediate seriousness." Ulcer symptoms do not always precede hemorrhage; it may occur without warning, and yet there may be symptoms of peptic ulcer and no ulcer present. Many unnecessary operations have been performed because of these mis-leading symptoms. It is important to mention here that a decided hemorrhage may occur from erosion in the gastric mucosa.

The late Dr. Rodman pointed out the inadvisability of operation during hemorrhage due to these reasons: first, the patient is not in a good condition for operation; second, the emergency of the situation does not permit a differential diagnosis; and third, recovery from the hemorrhage is the rule. The patient is carried through the active hemorrhage by absolute rest, morphine, ice and transfusion and later, if ulcer is diagnosed and when the patient is in favorable condition treat surgically.

Cancer of the stomach, as a rule, is not

associated with hemorrhage, although bleeding is common, but not in sufficient quantity to be vomited. There may be a continuous oozing such as occurs in cancer of the rectum or uterus. However, statistics mention that hemorrhage occurs in about 8 per cent of cases.

Now in regard to syphilis of the stomach we find that hemorrhage occurs in 5 per cent of the cases and in benign tumors in 9 per cent.

We will now consider extra-gastric causes of hemorrhage which greatly predominate. Cirrhosis of the liver comes first in frequency and importance. It has long been recognized that hemorrhage may be due to hepatic cirrhosis. This condition of the liver, theoretically, is often produced by "any toxic focus from which the venous blood is delivered directly to the portal circulation causing an infectious process in the liver sufficient to produce cirrhosis." There is ample clinical evidence to support this view. It has been pointed out by various observers that the spleen is often the cause of cirrhotic changes in the liver brought about by the "spleen acting as a sieve in catching and destroying pathogenic bacteria; these bacteria may be of such a character or number that the spleen becomes permanently disabled in its function and may deliver directly to the liver, through the splenic vein, toxins, which sooner or later set up cirrhotic changes in the liver." When this occurs if splenectomy is done in time will remove the focus of infection and arrest the progress of the cirrhosis.

The next most common cause of hemorrhage due to extra-gastric lesions are certain diseases of the spleen. Splenic anemia is the one most often associated with gastric hemorrhage. In a report of 74 splenectomies for splenic anemia, 50% of the patients gave a history of one or more gastric hemorrhages.

Gall-bladder diseases, especially when associated with pancreatitis may cause gastric

hemorrhage. There have been a number of cases reported in which the results after operation proved that the lesion in the gall-bladder or pancreas was responsible for the hemorrhage. Eusterman says, "That 4% of the patients with gall-bladder disease, characterized by well marked reflex gastric disturbances, give a history of gastric hemorrhages."

Diseased appendix is another factor in considering extra-gastric hemorrhages. A number of observers have reported cases in which the history, the finding at operation, and the results of operation, proved that the appendix was responsible for the gastric hemorrhage. Four years ago a case of this kind came under my observation. The patient had a profuse gastric hemorrhage, which I thought was due to peptic ulcer. Later, X-Ray failed to demonstrate ulcer. History and symptoms were negative pertaining to the appendix and other organs in the abdomen. Four months afterwards he had a decided attack of appendicitis. At the time of the operation the stomach and duodenum did not reveal ulcers; the spleen, liver, gall-bladder and pancreas were carefully examined and apparently normal. A well marked diseased appendix was found and removed. The patient has had no return of the hemorrhage and enjoys the best of health.

Since it is accepted and recognized that chronic infectious processes may be responsible for gastric hemorrhages, the question arises; in what way are these hemorrhages brought about? It is known that hepatic cirrhosis is the most common cause, probably explained that as a large part of the blood of the body is transmitted through the liver, toxins are thereby conveyed and if the source of the toxins are not eradicated sooner or later cirrhotic changes in the liver take place. The origin of these toxins, most often are from diseased spleen, appendix, gall-bladder, teeth, tonsils, etc.

## DISCUSSION

DR. R. LEE SANDERS, (Memphis, Tenn.):

Doctor Baker has given us a splendid paper on a subject of extreme importance and has emphasized the fact that 75 per cent. of the cases are due to lesions extra gastric. That is quite right, I feel sure.

The last year or two I have been compiling some statistics which are incorporated in the paper which I hold in my hand and from which I would like to read one extract which emphasizes the question of gastric hemorrhage. In this paragraph I make this statement:

"Gastric hemorrhage has been looked upon for many years as a sure sign of ulcer, but the more we learn about the stomach the less reliance we place on this symptom alone. Vomiting and hemorrhage may be factors, but when they are the only symptoms ulcer is rarely found.

"In Surgery, Gynecology and Obstetrics for April, 1922, Armstrong of Montreal called attention to ten or a dozen cases of "massive" gastric hemorrhage occurring in his service during the past few years. The patients vomited great amounts of blood, but practically no other symptoms were manifested. Exploratory laparotomies were done on several of these cases, but no ulcers were found. In one case a gastroenterostomy was done and the patient died. Autopsy failed to reveal any pathology. The more recent of his cases have been treated by using blood transfusion and no surgery. The results have been good. He concludes that such massive hemorrhages may have been due to some type of infection, and that some say the bacteriologists, following the lead of Rosenow, will identify and culture the specific organism as a causative agent."

The question of the etiology of ulcer, gastric and duodenal, I have dealt with at length in this paper. Some studies in an anatomical way have been carried on, particularly on the duodenal side and the gastric side near the pylorus. Then there is another group on the lesser curvature, particularly on the posterior wall, where resection is not possible. I have some slides of this group and with permission I will show them at this time.

DR. F. M. DURHAM, (Columbia):

There are a great many ulcers of the stomach with bleeding, which the X-Ray and no other method we have will diagnose. The only way is to open the stomach and look into it. In these cases 75 per cent. of the

hemorrhages from the stomach are not due to ulcer—in a way that is true, but it is due to disease of the spleen or liver or other organs in which the patient has become moribund. You will find these hemorrhages are not only from the mucous membranes of the stomach, but from every mucous membrane of the body. Of course the stomach may be more susceptible to hemorrhage than other portions of the body.

I have seen many gastric hemorrhages, but I have never seen a man die from gastric hemorrhage. I do not mean to say that they do not do it, but I put these patients to bed and give them a hypodermic of morphine and let them alone, and I have never seen one die from hemorrhage.

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DR. W. A. WALLACE, (Spartanburg):

I want to mention two cases that were in my hands in the last few days. One was a man who had taken fifteen grains of bichloride of mercury with suicidal intent. After forcible gastric lavage and getting rid of as much of it as possible the man made a good recovery. About six weeks after going back to work he had a distressing hemorrhage, which of course was probably due to gastric ulcer caused by the erosion of the bichloride. But he has since recovered and is back at work again.

The other case which we have at the hospital at present illustrates the point brought out by Doctor Baker regarding the relation between appendicitis and gastric hemorrhage. I never thought of it except in connection with this case. When we first saw the patient he had had a very disastrous hemorrhage and was almost moribund. He had had two severe attacks of appendicitis without operation. We thought this patient had had gastric hemorrhage with a diagnosis of appendicitis. The last week this patient developed a very severe attack of appendicitis which required operation, and the appendix was removed, but no evidence of ulcer was found. I wanted to mention that because it brought out the point Doctor Baker had mentioned of the relation between appendicitis and ulcer.

DR. A. E. BAKER, (closing):

I only want to thank the gentlemen for their discussion, and to congratulate Doctor Sanders on doing such good scientific work in stomach surgery. His slides were especially good.

## CONGENITAL PYLORIC STENOSIS

*By Roger G. Doughty, M. D., Columbia, S. C.*

A very large and somewhat confusing literature dealing with congenital pyloric stenosis has grown up since 1900. I wish to add to it the report of a case and a discussion of the condition.

A four months old male child was seen on October 4, 1923, in consultation with Dr. William Weston, of Columbia. Dr. Weston had been observing the patient for about ten days. The chief complaint was vomiting. The family history was entirely negative. Three other children had been normal. The delivery was at full term and was a normal labor. The birth weight was nine and a half pounds.

Nothing abnormal had been noted about the child until the thirteenth week. While still nursing the patient began to vomit after feedings. The vomiting was projectile in character. At the end of the thirteenth week the child was put on Mellins food, but the vomiting continued. When seen by Dr. Weston at the end of the fifteenth week the weight was nine pounds, five and a half ounces, the color was pale, the muscles flabby and distinct peristaltic waves were noted in the left upper quadrant of the abdomen. They moved from left to right. No mass was palpable in the abdomen at this time. The temperature was 103.0 F. The urine was scanty and showed some diacetic acid.

The stomach was washed out several times and thick cereal feedings were given. On the 24th of September, three days after Dr. Weston's first examination, a firm mass was palpated in the right upper quadrant. On the 26th, the child retained all of his feedings and his condition seemed much improved. This continued, and, on the 30th he was dismissed from the hospital, instructions being given the mother to continue the

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thick cereal feedings and to report promptly in event of a return of the vomiting.

The day after dismissal the baby vomited one feeding. The next afternoon he could retain nothing. He was readmitted to the hospital late in the afternoon of October 4th. The dehydration was marked. The peristalsis in the left upper quadrant was striking after feedings and the vomiting was projectile. No very definite mass, however, could be felt in the region of the pylorus. The urine again showed diacetic acid.

The baby was immediately given 150 c. c. of normal salt solution intra-peritoneally. During the night his condition improved somewhat, but still, operation was considered imperative. The salt injection was repeated and the stomach was washed out about an hour before the abdomen was opened.

Under local anesthesia a very high right rectus incision was made. The pylorus was found to be thickened and cartilaginous, and had the characteristic glistening, grayish-white appearance. It was the shape of an olive and about 3-4 inch long and from one quarter to a half inch thick. The intestine distal to the pylorus was collapsed while the stomach was distended.

A shallow incision was made in the avascular portion of the olive and along its entire length. This was then spread with a haemostat until the submucosa bulged into the wound. It was felt that the operation was complete but communication between the stomach and the duodenum could not be demonstrated. The pyloric incision was therefore carried half an inch further up on the stomach and a definite constriction was released here. With the bulging of the submucosa into the wound there was a passage of gas from the stomach, through the pylorus, into the duodenum.

It was necessary to suture one bleeding point in the wall of the pyloric incision. The pylorus was then dropped back into the abdomen and the peritoneum closed with a continuous cat gut suture. The abdominal wall was closed with interrupted silk

worm gut sutures. The closure was without drainage. The condition of the patient seemed good.

Three hours after the operation 5 cc. of breast milk and 5 cc. of barley water were given by mouth. This was retained. The amount was increased until at the end of twenty-four hours the patient was receiving one ounce of breast milk and about 10 cc. of water at each feeding. In the course of a week the patient was on a diet more than sufficient to meet his needs and no vomiting whatever had occurred.

On the afternoon before operation the temperature was 102.3 F. The day after operation it again rose, going to 103.3 F. It promptly fell, however, and on the third day reached normal and there remained. Twelve days after operation the weight was nine pounds, nine ounces and fifteen days after operation it was ten pounds, eight ounces. The wound had healed nicely and the patient was dismissed. A letter from the mother a month later reported the baby in good condition.

Congenital pyloric stenosis is a condition characterized by hypertrophy of the circular fibres of the muscular coat of the pylorus, with or without resulting occlusion of the lumen. The first published account was by George Armstrong in 1777. He was followed by Beardsley, of Connecticut, in 1788, who records the autopsy findings as a "scirrhus" of the pylorus. The condition attracted the attention of pediatricians about 1900 and since then the literature has been replete with case reports and analyses of results of medical and surgical treatments.

There are two important theories as to the cause of pyloric stenosis. The first undertakes to explain the hypertrophy as being the result of a primary pyloro-spasm. However, spasms of other portions of the intestinal tract rarely, if ever, result in hypertrophy. Further, the spasm itself must in turn be explained, and no satisfactory theory has been offered. The second

theory is that there is a purely congenital hypertrophy, a developmental defect of over development. This is, of course, satisfactory so far as the occurrence of the condition in day old infants is concerned. It is to explain the non-appearance of the symptoms immediately after birth that the idea of a secondary pyloro-spasm is invoked. Lucas, in a very excellent article, has suggested that, with a pylorus greatly thickened at birth and the lumen narrowed, the constant irritation of food passing through such a small canal should produce an inflammation and oedema of the mucosa and finally a spasm of the muscle. With the varying degrees of involvement of the two factors—the congenital malformation and the “irritative spasm”—varying clinical pictures might result. Where the spasm is predominant the symptoms should appear late, while in those cases where the congenital deformity is the greatest factor they should appear early. There is certainly much evidence clinically to commend this view.

The incidence of pyloric stenosis has been variously estimated at from one to four percent. About eighty percent of the cases occur in males and fifty percent, in first born children. No adequate explanation has been offered for this. Pyloric stenosis occurs more commonly from the third to the fourth week of life but Dent reports having found it in a seven months fetus at autopsy. Our case was four months of age which is somewhat unusual. However, at least ten cases in adults have been reported as being true congenital pyloric stenosis and through a personal communication I have learned of an eleventh that will be reported shortly. It is interesting to note that Osler, in his text book, has mentioned cases of thickening of the pylorus in adults but devotes only a few lines to it.

The chief presenting symptom of the condition is vomiting. The onset is at times gradual, at other times so sudden that the mother can name the exact hour. The

vomiting is projectile in type from the beginning in these latter cases. Where the onset is gradual the vomiting may not become projectile for several days. The vomiting usually occurs during or just after a feeding and the real seriousness of the condition lies in the resulting starvation.

On examination, particularly after a feeding, peristaltic waves are usually prominent in the left hypochondriac region. They move from left to right. Reverse peristalsis in the transverse colon could at best imitate it but poorly. Gastric retention may occur in cases in which symptoms have been present for several days. In these the waves may sometimes be seen only occasionally and the patient may retain a feeding only to vomit it together with the next.

The amount and type of the stools varies, of course, according to the amount of food if any, which is able to make its way through to the duodenum. The urine, due to the lack of fluids, is very scanty and with approaching starvation will show diacetic acid and acetone bodies.

The diagnosis is relatively easy. Practically no other condition in infancy will produce typical projectile vomiting, marked loss in weight, dehydration and meconium like stools. The X-Ray will sometimes shorten the period of observation and is useful in that way. Strauss, however, thinks that by fluoroscopic studies he can absolutely differentiate the cases in which operation is necessary from those in which it is not.

Two distinct schools have arisen in connection with the treatment of pyloric stenosis, both apparently having their origin in the theories of the underlying pathology of the condition.

Atropine is regarded almost as a specific by many of those who believe the condition to be due essentially to spasm, while surgery is held to be the only rational procedure by the majority of those who think the obstruction due to the muscular hypertrophy and largely mechanical. A few, and among

them apparently Strauss, attempt to divide the cases into two groups, one of pylorospasm and the other of true hypertrophic stenosis, advocating the use of atropine only in the former.

A discussion in detail of the claims advanced for the atropine treatment would be useless. It should be remembered that there is a distinct tendency toward self limitation of the condition so long as complete obstruction does not supervene. With this in mind Gray and Reynolds suggested that atropine probably did not act upon the pylorus directly, but by reducing the oedema of the mucosa, might tide the patient over the critical period. It is certainly difficult for one who has seen and felt the pylorus in these cases to believe that anything short of surgery can relieve the stenosis.

With at least ten authentic cases in the literature now, and an eleventh to be added to it shortly, of the same pathology being found in later life, and with the autopsy findings of persistent tumors in children treated medically and apparently cured, but subsequently dying from other causes, it seems that final judgment on the use of atropine should be reserved.

When atropine is used it should be pushed until a definite general therapeutic effect is obtained. Haas lays great stress on the necessity of absolutely fresh preparations of the drug. The dosage varies from one one thousandth of a grain to sixteen one thousandths of a grain at each feeding (one eighth of a grain in twenty-four hours), as may be indicated. It can be given hypodermatically or by mouth, the dosage, strangely enough being the same. Frequent gastric lavage, thick cereal feedings and measures looking toward the maintenance of the body fluids, are used in conjunction with the drug.

Surgery was almost a frank failure until the advent of the Fredet-Rammstedt operation. Prior to that posterior gastro-enterostomy and various plastic operations on the pylorus were performed. In the Fredet-

Rammstedt operation an incision is made in the hypertrophied pylorus in its relatively avascular area above the limits of the pyloric vein. The incision is shallow and with a haemostat it is spread apart. Owing to the cartilage-like consistency of the tumor it will split readily allowing the submucosa to bulge into the wound without rupturing. There is usually little or no bleeding. The pylorus is then returned to the abdomen without any attempt at closure of the pyloric incision. Owing to the fact that the patient is not infrequently in such poor condition that wound healing may be very slow it is always advisable to close the abdomen with interrupted silk worm gut sutures.

In patients past the seventh to the twelfth weeks of life, annoying, or even serious, vomiting following this operation has been reported often enough to warrant attention and thought being given the matter. No post-operative vomiting whatever occurred in the case just reported but a definite obstruction was found much higher up on the stomach than was expected. The prominence and ability of the men reporting vomiting after the Rammstedt operation seem almost to rule out the possibility of an obstruction higher up on the stomach having been overlooked but their reports do not mention this condition having been found.

Two modifications of the Rammstedt operation have gained some prominence. Strauss strongly advocates a plastic procedure in which the submucosa is shelled out of the thickened musculature and a flap of the latter is then turned up to cover the incision in the pylorus. This, he reports, does away with the vomiting post-operatively. Hildebrandt resects a wedge of the pylorus to prevent the possibility of the edges of the pyloric incision adhering and reuniting.

Downes and others have reported such good results with the Rammstedt operation that these modifications seem unnecessary. Their accepted mortality ranges from ten to fifteen per cent. when all types of cases are



included. In babies who have lost less than twenty per cent. of their body weight and who have been vomiting for less than a week they report a practically negligible mortality. Viewed in this light conservative treatment should be given a fair trial but resort to operation should be had without hesitation in cases which do not respond promptly.

The maintenance of the fluid needs of the child is imperative. It may be accomplished by hypodermaclysis, or by intra-peritoneal or intra-venous injection of normal salt solution.

Lucas, in speaking of the operation, says: "There are few conditions in which the outcome—depends so directly upon the skill and rapidity of the surgeon." Rapidity depends to some extent upon instruments. The patient is small; the wound tiny; the instruments should be correspondingly small. Because of the size of the patient we are apt to overlook the possibility that his body may be exposed during the operation to such an extent that the loss of heat may seriously militate against him.

After the operation the semi-erect posture is usually maintained for a day or two. The feedings are begun practically immediately after operation and it is of course best to have a pediatrician supervise them. At first only five or ten cc. are given but the amount is rapidly increased until at the end of twenty-four hours about an ounce is given at each feeding. Thereafter the quantity is increased more gradually.

The end results in cases followed over long periods of time have been excellent. Wollstein has reported the autopsy findings in cases dying from other causes after the Rammstedt operation had been performed. Her series is large and she finds that about the ninth day after operation the pylorus has returned to its normal thickness. After sixteen months there is only "A very fine linear scar and after two years the scar is hardly visible." Clinically the progress of

the infants is the same as that of normal children.

#### Conclusions:

1. The case reported was unusual in that the patient was four months of age and was the fourth child: That after the operation was apparently completed a definite constriction was freed well up on the stomach.

2. That two factors are involved in the clinical picture; namely congenital hypertrophy of the circular muscle fibres and "irritative spasm."

3. That while medical treatment should be tried undue delay in operation is unwarranted.

4. That further observations are needed as to the cause of vomiting after the Rammstedt operation in infants over twelve weeks old.

#### BIBLIOGRAPHY

1. Bass, M. H. M. Clin. N. Am., 1922, ii, 538.
2. Downes, W. A. J. Am. M. Ass., 1920, lxxv, 228. Surg. Gynec. & Obst., xxii, 251.
3. Ellars, L. R. Internat. J. Surg., 1923, xxxvi, 150.
4. Fenton, V. N. Brit. M. J., 1922, ii, 644.
5. Gorbandt. Abstracted: J. Am. M. Ass., 1922, lxxviii, 1935.
6. Gray and Reynolds. Brit. M. J., 1921, ii, 891.
7. Haas, S. V. J. Am. M. Ass., 1922, lxxix, 16. and 1314. Am. J. Dis. Child., 1918, xv, 323. Arch. Ped., 1919, xxxvi, 516.
8. Hardt, A. F. Penna. M. J., 1919, xxiii, 444.
9. Heidelhain, L. and Gruber, G. B. Abstracted: Surg. Gynec. & Obst. (Internat. Abs. Surg.), 1924, xxxviii, 204.
10. Holt, L. E. Diseases of Infancy and Childhood. New York: D. Appleton & Co., 1918. J. Am. M. Ass., 1917, lxvii, 1517. Discussion; Arch. Ped., 1918, xxxv, 343.
11. Lucas, W. P. M. Clin. N. Am., 1923, ii, 1393.

12. McGuire, S. Surg. Clin. N. Am., 1922, ii, 1263.
13. Moore, South. M. J., 1922, xv, 699.
14. Morse, J. L. Discussion, Arch. Ped., 1918, xxxv, 343.
15. Oliver, J. C. Ann. Surg., 1922, lxxvi, 807.
16. Rowlands, R. P. Lancet, 1922, cci, 1373. Abstracted: Surg. Gynec. & Obst. (Internat. Abs. Surg.), 1922 xxxiv, 282.
17. Strauss, A. A. J. Am. M. Ass., 1918, lxxi.
18. Thompson, J. Brit. M. J., 1921, ii, 889.
19. Tumpeer, I. H. and Bernstein, M. A. Am. J. Dis. Child., 1922, xxiv, 306.
20. Wollstein, M. Am. J. Dis. Child., 1922 xxiii, 511.

#### DISCUSSION

DR. E. D. BARRON, (Columbia):

I wish to commend Doctor Doughty for bringing this question of pyloric stenosis before us. He states that the mortality in that type of case is 15 to 20 per cent., but where the cases are operated early is much lower. I believe it was Downs of New York who had operated some 80 cases—the same as done by Doctor Doughty—the Rammstedt operation.

Doctor Doughty cites the four important diagnostic points—projectile vomiting, rapid loss of weight, dehydration, and mucopurulent stools. I think where you get this picture there is no use to hesitate. I do not know that any other condition but pyloric stenosis would give this picture. With these four symptoms if you are in doubt give that baby a barium meal and have an X-Ray taken. The diagnosis in this way is easily confirmed. I have seen two cases—one twelve months ago and one six months ago. The condition was suspected, the baby given a barium meal, and the diagnosis confirmed. Feeding was as outlined by Doctor Doughty. We started with 10 cc. of breast milk and gradually increased the quantity until the child had gotten back to the normal amount. We gave this by medicine dropper. The milk was drawn from the breast and fed to the baby. Within the course of a few days both of these babies were allowed to go back to the breast.

Post of New York has so much in the litera-

ture upon the use of atropin. Atropin was practically discarded in Boston. In my experience there for eighteen months I saw it used with no results. Howell advocated the use of the duodenal catheter as a diagnostic measure and also as treatment. I am unable to give his results, but my conclusions after my experience in Boston and from the literature is that pyloric stenosis is a surgical condition and if operation is done before these babies become exhausted and dehydrated it is a life-saving measure. In my opinion pyloric stenosis, unless operated on early, is practically hopeless, and that palliative treatment is nil. The sooner operation is done the better.

DR. R. M. POLLITZER, (Greenville):

The diagnosis of these cases is not difficult. Time is most important. Projectile vomiting is always important. The operation is safe and speedy. I feel that palliation is dangerous. In my experience every case that has been operated on promptly recovered.

There is no reason why these cases should not be recognized. Projectile vomiting does not mean a difficult feeder, it means pyloric stenosis. Make the diagnosis quickly, do the operation quickly, and then in a few days you have a perfectly well and happy baby.

DR. ROGER G. DOUGHTY, (closing):

I want to thank the gentlemen for their discussion and to add two or three points. The first is the question of instruments. The patient is very small and the instruments of the average surgeon are very large—they will not do. You cannot do work on a baby in a small incision with a large instrument. The surgeon should have equipment that will fit.

Instead of there being only ten cases in the literature I have only taken the ten that were absolutely authentic. There were over thirty cases that were practically certain. Some of these cases have been operated with excellent results. The English are finding many more cases than we do. Is that because we are not looking for them? As to adults, it is my present belief that many cases are operated on because the X-Ray shows some deformity of the cap; and these cases are more than apt to be cases of congenital pyloric stenosis that have not had operation. One man at the conclusion had attacks of vomiting after extreme exertion.

## UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

BAILEY, HAMILTON AND HUDDY, G. P. B.: EXTRAVASATION OF URINE: WITH ESPECIAL REFERENCE TO PERI-URETHRAL ABSCESS. THE BRITISH JOURNAL OF SURGERY, VOL. XII, JULY 1924, P. 183.

From 1908-22, 107 cases of extravasation of urine from all causes were admitted to the London Hospital. Of these, 65 were caused by peri-urethral abscess, 20 from traumatic rupture of the urethra, 13 following injury to the urinary bladder, 7 from suprapubic puncture; 1 was caused from extravasation in infancy and 1 following internal urethrotomy.

Extravasation following peri-urethral abscess is a frequent complication of a long-standing urethral stricture. The stricture how standing urethral stricture. The stricture, however, does not appear to be the essential factor in bringing about the extravasation but rather according to the author a virulent infection extending to the peri-urethral tissues.

He divides these cases clinically into three groups: (1) A swelling (peri-urethral abscess) has been present for a considerable period, but recently has increased in size and broken its confines; (2) While straining at micturition, the patient experiences a 'sudden bursting' in the perineum; (3) A perineal fistula (often of spontaneous origin, and following an abscess) has recently closed. In severe cases, chills or delirium or coma may be the most prominent symptoms. The author reports a high mortality, 43 per cent in this series, and attributes septicaemia and uraemia to be the chief causes of death.

In the cases complicated with uraemia he advises bladder drainage and does not think that incision into the inflamed area or division of the stricture or both to be sufficient. He mentions the various methods which have been employed: (1) Multiple incisions only; (2) Multiple incision combined with suprapubic cystotomy; (3) Multiple incision combined with perineal cystotomy. The first method is quite unsatisfactory. The second, while strongly recommended by Wolfer, has obvious objections in the danger of deep pelvic cellulitis and a sudden emptying of a distended bladder.

The third method is the one of choice. The author presents the following technic: a preliminary urethroscopy to ascertain the site and estimate the calibre of the stricture if one is present. The urethra is washed out and novocain is instilled. He then attempts to pass a bougie into the bladder. If the bougie cannot be passed, Wheelhouse's operation is performed under anesthesia. If a bougie has been passed an external urethrotomy is done in the usual manner. The cellular tissues are drained by passing the forefinger through the perineal wound upward and outward, clearing the crus penis, and made to protrude subcutaneously above and into the outside of the symphysis pubis; the skin is then incised over the finger and drainage tubes are inserted through the openings and the perineal wound. He recommends incisions into the infiltrated tissues; injections of hydrogen peroxide into the subcutaneous tissues around the incision and moist dressings. He uses hot gin and quinine to combat the rigors. (Since the former cannot be gotten in this country, intravenous injections of mercurochrome would be advisable.)



## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### CARCINOMA OF THE LARYNX Crile-Long Clinics of N. A. Aug. 1924.

Laryngectomy has had an immediate popularity. It constitutes a surgical triumph.

The first laryngectomy in man was done in 1866. Within the next 17 years 65 of these operations had been done, and there was a far higher percentage of them free from recurrence for some time following this operation than there were in a similar number of thyrotomies for intrinsic lesions.

Thyrotomy operation is potentially dangerous because of the difficulty to keep blood and secretions out of the trachea and bronchi.

The author believes intrinsic laryngeal carcinoma to be the most curable of malignant disease. He states that surgery is preferable to Radium for its removal.

Laryngeal carcinoma comprises about 1.5 per cent of all malignant growths. It is more frequent in the male than in the female, and is most prevalent in the fifth decade.

In 582 of proven cancer Jackson cites vocal abuse or over-use of the cords as the etiological factor in 64.6 per cent.

Irritant inhalation is another possible cause.

Regardless of the stage of the growth, laryngectomy is the treatment of choice. The operation should be done in two or more seances.

Under local anesthesia a preliminary tracheotomy is performed. Within a few days, the patient is anesthetized by means of a tight fitting rubber tube inserted down

into the trachea through the tracheotomy opening.

An incision is then made above this opening and the soft parts are retracted, thus exposing the larynx and upper trachea. By further dissection these and adjacent tissues are mobilized and removed and the upper free end of the remaining trachea is brought out to the skin surface and sutured there. The author at this stage leaves the wound open, packing it with gauze for a few days and closes it at a later date either by direct apposition or by skin graft.

The reaction for the first few days is usually quite marked.

Intrinsic laryngeal carcinoma can extend into adjacent tissues only through the line of esophageal attachment behind or the arytenoids and epiglottis above.

Extrinsic cancer is more formidable and far less favorable results are obtainable, either by surgery, X-Ray or Radium.

The immediate post operative care is of the utmost importance. The dressings should be changed frequently, the discharge or drainage carefully sponged away and the parts kept practically dry. As the wound gradually heals up to and around the trachea, the attention becomes less exacting and the tracheotomy tube should be removed as soon as possible to prevent tracheitis.

The patients are given quantities of liquid nourishment, preferably vegetable, gruels through a duodenal tube, which should be passed one or two days prior to the second stage process.

Should a plug of mucus lodge in the trachea close to its bifurcation, this plug should be dislodged by passing a catheter or else death is apt to occur.

## PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

Notwithstanding the excellent work and thorough research that has been done along the lines of etiology and surgical treatment of hydrocephalus the prospect of relief is extremely poor and most cases are permitted to linger as idiots and paralytics until death comes to the rescue. Hydrocephalus is admitted to be in nearly all instances beyond the skill of the physician. However in the American Journal of Diseases of Children (vol. 28, No. 4, Oct. 1924) Marriott proposes a remedy for certain cases which may prove to be of great value. His article is entitled "The use of Theobromin Soda Salicylate in the treatment of hydrocephalus."

From the papers of Dandy & Blackfan especially it has been learned that internal hydrocephalus may come about through hypersecretion of spinal fluid or lessened absorptive capacity. Where there is some anatomical block and the passages are shut off little can be expected; but in the communicating type any drug that tends to hasten "the passage of fluid from the subarachnoid spaces back into the blood" should be of great aid. Marriott from experiments on edema and deductions based on them administered diuretin to six infants. He concludes that so far the drug appears to be a valuable remedy in the "communicating type of hydrocephalus." Should a larger series give the same results and other workers meet with success, then medicine will have triumphed at least in some degree over a hitherto well-nigh hopeless condition.

Advice especially free advice is seldom taken. If the words of conservatism do not meet with our approval we immediately brand the person as being too conservative or too scientific. However, there are men of repute whose standing and character is such that one must seriously consider and

carefully weigh their words in order to avoid losing an opportunity of learning the present day thought of the leaders in the field. John Howland in "A consideration of endocrine therapy in infancy and childhood" (Southern Medical Journal Vol. xviii, no. 10, Oct. '24) carefully and without prejudice reviews the claims on which much of endocrine therapy rests today. He finds that many of our fallacious or unsupported ideas emanate from interested drug houses, and that there is very little pathologic, chemical or physiologic ground work for them, even, though there have been many poorly controlled and unverified experiments on the lower animals. The conclusions drawn by various workers in this new field are most conflicting. He states that "the conclusion is forced on us" that if we use single extracts in pediatrics, we are confined to the treatment of two conditions, thyroid deficiency and diabetes". Further on he asks "on what basis does polyglandular therapy rest?" He maintains that the enthusiast is unable to demonstrate to us this basis. Judging from the large number of clinicians who today are using polyglandular extracts with a hope, rather than any definite idea of what they are trying to do this warning against running after false gods is most timely. For unless the medical profession refuses to be led astray from the proper fields of scientific medicine, the laity are bound very soon to get their information first hand from the drug houses themselves and regard their doctor as a rather useless middleman in many chronic ailments. And after all as Howland states—"We owe it to our patients and we owe it to ourselves to sharpen our powers of discrimination." The optimist is far more likeable chap than the skeptic, but as the writer concludes—"It is the truth we seek, whether it be bitter or sweet."

## SOCIETY REPORTS

### THIRD DISTRICT MEDICAL SOCIETY

The Third District Medical Society met at Abbeville, October 16th. There was a large number, about seventy-five present including visitors from the surrounding counties. Dr. D. M. Crosson, President of the South Carolina Medical Association and Dr. E. A. Hines, Secretary were present. Both of these state officers made an address. The following program was carried out in its main features:

#### PAPERS

Dr. E. L. Power, Remarks on the practice of Medicine and Surgery in Korea.  
Dr. C. H. Blake, Renal Calculus.  
Dr. Hugh S. Black, Post Operative Wounds.  
Dr. R. W. Houseal, Improvements in the Methods of the Diagnosis of Syphilis.  
DR. T. L. W. Bailey, Subject Unannounced.

#### DINNER IN AMERICAN LEGION HALL, 1 O'CLOCK

Dr. Wm. A. Mulhern, Augusta, Ga., A few Pediatric Vagaries. Professor Pediatrics of University of Ga.  
Dr. Rolfe E. Hughs, The Doctor as a Business Man.  
Dr. R. M. Fuller, Congenital Hernia. Report of Two Cases.  
Dr. Geo. P. Neel, Simplified Technic of two rather simple operations.  
Clinical Cases.  
New Business.  
Adjourn.

As a presiding officer Dr. J. C. Harper of Greenwood has few equals for making the visitors feel at ease and welcome to the floor. Dr. C. C. Gambrell of Abbeville with his many years as a Medical Society Secretary is an able officer surpassed by few.

A most enjoyable feature was the ride about the beautiful and progressive city of Abbeville provided by the citizens immediately following the sumptuous luncheon furnished by the ladies of the A. R. P. Church. Much of the good fellowship existing in the Third District is due to the splendid activities of the Councilor Dr. T. L. W. Bailey of Clinton.

### SECOND DISTRICT MEDICAL AS- SOCIATION OF SOUTH CARO- LINA, WEDNESDAY, JULY 23, COLUMBIA, S. C.

"Some Urological Observations," Dr. W. R. Barron. Discussion opened by Dr. Edgerton.

"The Prevention of some of the more serious surgical Complications," Dr. Boling. Discussion opened by Drs. Bunch and Guerry.

"Causes of Diarrhea in Children," Dr. Weston. Discussion opened by Dr. Dotterer.

"Pielitis or Pregnancy—Prevention," Dr. Seibels. Discussion opened by Dr. DuBose, Jr.

"Malignancy of the Chest, (case report)," Dr. Fouche. Discussion opened by Drs. H. Gibbes, Pitts and Rodgers.

"Some Preventive Medical Measures," Dr. Smith. Discussion opened by Dr. Routh.

"Prevention of Deformities," Dr. Boyd. Discussion opened by Dr. Doughty.

The papers by Dr. G. McF. Mood of Charleston and Dr. H. M. Smith of Columbia were of such general interest to the public on Preventive Medicine that it was voted to have them published in the public press. Officers elected for the ensuing year were: President, Marion H. Wyman, M. D.,



Columbia, S. C.; Vice President, L. C. Brooker, M. D., Swansea, S. C.; Secretary-Treasurer, F. M. Routh, M. D., Columbia, S. C.

Address by Dr. D. M. Crosson, Leesville, President South Carolina Medical Association.

Address by Dr. James A. Hayne, Columbia, State Health Officer.

## PEE DEE MEDICAL SOCIETY MEETS

### PAPERS

The Pee Dee Medical Association held its annual meeting in the Kiwanis rooms at the Hotel Florence on Tuesday, November 18. The Pee Dee Medical Association is the second oldest medical society in South Carolina, the oldest being the medical society of South Carolina, which is the local Charleston society.

The Pee Dee Association is made up of the counties of Chesterfield, Marlboro, Darlington, Dillon, Marion, Horry and Florence, these being the sixth councillor district of the South Carolina Medical Association.

The invited guests were: Dr. M. Pierce Rucker, of Richmond, Va., an Obstetrician of note, and the President of the State Medical Association, Dr. D. M. Crosson, of Leesville.

### PROGRAM

10 a. m.—Meeting called to order by the President, Dr. Wm. Egleston, Hartsville.

Invocation by Rev. W. S. Poynor, Florence.

Reading of Minutes Dr. S. C. Henslee, secretary, Dillon.

1. Parturition a Surgical procedure. Dr. M. Pierce Rucker, Richmond, Va.

2. Transfusion of Blood. Dr. James McLeod, Florence.

3. Pellagra, Dr. J. C. Foster, Lake City.

4. The Thymus of Infancy and Childhood, Dr. L. B. Salters, Florence.

Remarks on Public Health Procedures for Control of Infectious diseases in Florence, Dr. P. H. Brigham, Health Commissioner.

6. A Laboratory Procedure of Interest to the general practitioner, Dr. W. G. Gamble, Jr., Florence.

7. A case of Subperiosteal Fracture of Tibia in a Child, Dr. C. R. May Bennettsville.

8. Diathermy and Some of its uses in medicine, Dr. E. E. Herlong; Florence.

9. Subject unannounced, Dr. S. J. Rogers, Centenary.

10. Subject unannounced, Dr. E. M. Dibble, Marion.

11. Infantile Paralysis in Father and child, report of cases, Dr. Wm. Egleston, Hartsville.

## NEWS ITEMS

A magnificent silver soup tureen was presented to Dr. Robert Wilson, Dean of the Medical College of the State of South Carolina by the alumni of the college at the recent centennial meeting. Dr. D. M. Crosson of Leesville, President of the Alumni Association made the presentation speech at the Centennial banquet on the evening of November 13th.

—o—

Dr. Archibald McIntyre, a senior member of the medical profession in Marion, and for many years leading physician in this county and the Pee Dee section died at one o'clock, Wednesday afternoon, November 19th in McLeod's infirmary, Florence, where he was taken, critically ill with pneumonia.

—o—

Announcement has been made by Dr. Sam Orr Black, that the splendid new Mary Black Clinic and private hospital, Spartanburg, S. C., will be opened December 15th. This will be an up-to-date institution in every particular and add greatly to the hospital facilities of South Carolina. This clinic was founded by Dr. H. R. Black in 1919.

—o—

The Southern Surgical Association will meet in Charleston, December 8th to 11th. Dr. LeGrande Guerry of Columbia is the President. This Society has upon its roll some of the world's greatest surgeons and limits its membership to two hundred. There is always a long waiting list.

—o—

The leading editorial of the Spartanburg Herald, November 19th referred to a great get together meeting in the interest of the Spartanburg County General Hospital. This hospital is comparatively new and is one of the best equipped institutions in the Southern states.

L. H. Deadwyler, chiropractor of Anderson, was sentenced to jail for sixty days convicted of practicing medicine without a license.

—o—

A splendid new tubercular hospital has been opened near the six mile post in Charleston County.

—o—

In addition to many other honors so worthily bestowed upon Dr. Robert Wilson of Charleston he was recently made a mason at sight, which is an extraordinary ceremony, having been granted by this ancient secret order on only one other occasion in South Carolina.

—o—

Dr. E. A. Hines, Seneca, S. C., Secretary-Editor of the South Carolina Medical Association was elected President of the Conference of Secretaries, Editors and Presidents of State Associations, held under the auspices of the American Medical Association at the Headquarters Building Chicago, November 21st, 22nd.

535 North Dearborn, St., Chicago, Ill.  
Nov. 29, 1924.

Dr. E. A. Hines, Editor,  
Journal South Carolina Medical Assn.,  
Seneca, S. C.  
Dear Doctor:

In addition to the articles enumerated in our letter of October 28th, the following have been accepted:

Hoffmann-LaRoche Chemical Works.

Secacornin.

Thigenol.

Intarvin Co., Inc.

Intarvin.

Eli Lilly and Co.

Ampules Ouabain, 0.0005 Gm. (1-128 grain)—Lilly.

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 Iletin (Insulin-Lilly) U-80.  
 Merk and Co.  
 Benzyl Succinate-Merck.  
 Parke, Davis and Co.  
 Ampoules Adrenalin Chloride Solution Rx 1, 1:10000, 1 Cc.  
 Ampoules Adrenalin Chloride Solution Rx 2, 1:2600, 1 Cc.  
 Ampoules Adrenalin Chloride Solution 1:1000, 1 Cc.  
 Sharp and Dohme.  
 Hypodermic Tablets Strophanthin 1-200 grain—S. and D. Ergotole.  
 Ampules Ergot, 1 Cc.  
 E. R. Squibb and Sons.  
 Insulin-Squibb, 10 Units.  
 Insulin-Squibb, 20 Units.
- Swan-Myers Co.  
 Sterile Ampoules Mercuric Potassium Iodine, 0.017 Gm., (1-4 grain)—Swan-Myers.  
 Synthetic Drug Co., Inc.  
 Compressible Capsules Mercury Salicylate "Synthetic" 1 grain for Intramuscular Injection.  
 Compressible Capsules Mercury Salicylate "Synthetic" 1 1-2 grains for Intramuscular Injection.  
 Compressible Capsules Mercury Salicylate "Synthetic" 2 grains for Intramuscular Injection.  
 Winthrop Chemical Co.  
 Novasurol.  
 Novasural Ampules.
- Yours truly,  
 W. A. PUCKNER, Secretary.  
 Council on Pharmacy and Chemistry.  
 WAP:T.

## EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., CHARLESTON, S. C.

### INTRAVENOUS ADMINISTRATION OF SODIUM SALICYLATE

Among the treatments of recent years that have proved of great benefit to an important class of ocular diseases, the use of sodium salicylate stands high, but there are a certain number of cases where its use by mouth is ineffective. In these cases Dr. M. Black in A. J. of Ophthal. 1924, pg. 773. gives the details of the intravenous method

by use of ampoules, grs. xv every day for a week or more as needed.

The technique is to use a sterile 5 or 10 c. c. syringe according to the dose used, paint over the vein in bend of elbow with Tr. Iodine, introduce the needle (24 gauge) into vein and withdraw blood before injecting in order to be sure that the vein has been entered, because if the solution be injected around the vein, much pain ensues. The injection is made slowly and no reaction occurs.



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# The Journal OF THE South Carolina Medical Association

VOL. XX.

GREENVILLE, S. C., DECEMBER, 1924

NO. 12

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# The Journal

## OF THE

# South Carolina Medical Association

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Published Every Month Under the Direction of the Board of Councilors.

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EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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#### ROENTGENOLOGY

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#### PATHOLOGY AND BACTERIOLOGY

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#### EYE, EAR, NOSE AND THROAT

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#### ANAESTHESIA

W. B. WARD, M. D., Rock Hill, S. C.

#### NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

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## EDITORIAL

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### THE PROGRAM FOR 1925

Before the holiday season begins this year much of the program for the 1925 meeting at Spartanburg will be under way. Most of the committees appointed by President D. M. Crosson have been active in their special departments preparing for the Spartanburg meeting. The Scientific Committee is an unusually strong one and there is no doubt about the high character of the program they will suggest. The personnel is as follows: Dr. F. H. Dieterich, Professor of Pathology Medical College, Charleston, Chairman; Dr. J. W. Jervy, Greenville, Dr. LeGrande Guerrey, Columbia. It is probable that two symposia, one for each day of the annual season will be provided and contributors invited for each.

The Chairman of the Committee will appreciate suggestions from the members as to the subject matter of this or any other part of the program.

Dr. J. E. Edwards has been appointed by the Spartanburg Society Chairman of the Steering Committee on Arrangements. The Secretary of the State Association has already visited Spartanburg and conferred with the local committee chairman in regard to tentative details for the next meeting.

To surpass the Orangeburg meeting will require extraordinary efforts on the part of everybody concerned. The attendance there was near the four hundred mark.

Spartanburg has unusual facilities for accommodating a large Medical Convention. The hotels are ample, Railroad and auto-



mobile service will be all that any one could ask for. The hospital facilities for holding the clinics already planned are most excellent. The third week in April, 21st, 22nd, 23rd, is the most fortunate time for our Association to hold its meeting. All of the nearby State Associations have changed their dates so there will be no conflict as has been the case from time immemorial.

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### GREETINGS

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The Journal is now in its twentieth year and has been placed on the desks of nearly one thousand South Carolina doctors for these two decades. The question was asked the Editor recently. "Is the Journal read?"

We have no means of knowing this but we believe that the average busy practitioner who is successful is perforce absolutely dependent upon current periodical medical literature for inspiration and guidance in his practice. The Editor often receives encouragement from widely separated sections and therefore he is constrained to believe that the members of the State Association are interested in its progress for in the main the Journal has had most loyal support for these twenty years. Suppose we take a look at the first issue, June 21st, 1905 published at Charleston, S. C., edited and managed there by the following staff; Robert Wilson, Jr., Editor, T. P. Whaley, Associate-Editor, C. P. Aimar, Managing Editor. The leading editorial called attention to the fact that Dr. W. P. Porcher of Charleston as President of the Association five years previous suggested a Journal instead of annual transactions. This editorial appealed for cooperation on the part of the members and especially society officers to send to the Journal important papers, news items, etc., for publication. Another editorial announced the beginning of the compulsory vaccination act of the General Assembly. It would be interesting to know just how many people are not vaccinated in South Carolina twenty years after this law was enacted. We are

confident that the law has been of inestimable benefit in the schools, especially; but every year smallpox prevails in many sections of the State. It should not be so with an absolute preventative so readily available. Again another editorial alludes to the first meeting of the National Association for the Study and Prevention of Tuberculosis and calls attention to a committee appointed by the State Association to begin active work in the name of the South Carolina Medical Association against the great white plague. The late Dr. John L. Dawson of Charleston who had himself been reclaimed from this dread malady was appointed Chairman of the committee. Dr. Dawson immediately organized the State for a valiant fight. He was eminently successful and as a result of this publicity the State some years later appropriated the money to erect a State Sanatorium at State Park eight miles from Columbia and placed its management under the State Board of Health. Continued generosity on the part of the State has enabled the Board to enlarge this institution from year to year. In the meantime the mortality from tuberculosis has been greatly reduced throughout the world.

In the first decade the Journal had five different editors, all of them men of marked ability and the Journal was published in as many different localities. It is interesting to notice the finances of the Association. The treasurer reported a balance of \$262.22. The assets of the Association at the present approximate \$3000.00, due largely to a consistent advertising policy of attracting and holding the best patrons. We owe much to our advertisers for their assistance in keeping the Journal in the front rank of the smaller State Journals of the United States. Although the cost of printing has quadrupled since that first number was printed twenty years ago the Journal now presents a highly creditable appearance from the make up standpoint. The paper is of good weight, the type easily readable, the extra cover attractive.

We would not do justice to the occasion if we failed to mention the high class scientific articles appearing in recent years and especially the contributions the past year by the members of the Associate Staff. This latter feature has stimulated a much greater interest in the Journal. The present

editor is profoundly grateful for the loyal cooperation of the members of the State Medical Association.

Most cordial Christmas greetings therefore are extended to the readers of the Journal for Christmas 1924.

## ORIGINAL ARTICLES

### A DEFINITE PROGRAM FOR 1925

*Frederick C. Warnshuis, M. D., Secretary  
Michigan State Medical Society, Grand  
Rapids, Michigan.*

Before I address myself to the subject I wish to make it quite clear that I have not the desire to pose as a director or an authority. The suggestions that will be presented represent present conclusions that have been reached. They are advanced for the purpose of submitting a basis from which, by our combined experiences, judgment and discussion, it is hoped that a desired outline of uniform activity for 1925 may result.

For some twelve years I have been privileged to attend these annual conferences. That they are valuable has long since been established. That good has come from them is attested to. In my administrative work I have derived much that has been of value and assistance. The acquaintance that has been fostered I prize most highly. However, in spite of these acknowledged benefits there has been growing on me a feeling that is hard to put aside, that we as state secretaries are not obtaining all that can and should result from these annual meetings. Are we profiting as we should? Are our component state units and our American Medical Association neglecting an opportunity?

Read before the annual conference of Secretaries and Editors of State Medical Associations, Chicago, Illinois, November 21st, 22nd, 1924.

Organization and organized effort succeed just so far as they meet up to the principles that inspire and govern their existence. It is these principles that determine prestige and accomplishments. It follows that unless these principles and policies are comprehensive, the purposes and achievements of an organization or association will be narrow and limited or broad and inclusive. If we are to attain the greatest ends, achieve the greatest good and contribute a maximum amount of assistance to our membership and the public at large, it is quite essential and important that our principles and purposes shall include certain definite and basic objects that are expressed in a program to guide our individual and collective efforts in a uniform execution of them by each component unit, thereby establishing a national program of sustained action.

I have frequently, and for a long period of time, meditated on this problem. I have reviewed, criticized and appraised our scheme of organization, the work that was being done and the results that were being obtained. I have endeavored to analyze them, diligently seeking to determine what were and what were not basic fundamentals. The quest has been to sift out and formulate in concrete terms primal objects to justify, inspire and direct our work. The result of this study and thought has been the formulation of four principles that are expressive of desirable objectives that we as county, state and national units should seek

to attain. They are advanced at this time with considerable hesitation. I purpose to outline in some detail the first principle as a definite recommendation that it comprise our program for 1925. The terms used to express these definite objectives are simple, but lend themselves to broad interpretation and are:

1. Acquaintance—to bring about understanding.
2. Fellowship—to establish good will.
3. Friendship—to encourage brotherhood.
4. Education—to increase individual efficiency.

#### ACQUAINTANCE—TO BRING ABOUT UNDERSTANDING

At first thought, one will hesitate to accept this as the first fundamental object that is basic for our organized existence and work. Permit me to enlarge on all that is included in the term acquaintance, and what can be made to result from an acquaintanceship that is employed to bring about understanding.

Membership is fundamental; that will be acknowledged. The last annual report of our Secretary imparts that there are 145,966 graduates of medicine in this country. He further imparts that there are 3,047 county medical societies comprise our component state societies and have a membership of 90,056 physicians. That the total Fellowship of the American Medical Association was 51,063, April 1, and is now more than 55,000. These figures furnish much for thought, if one analyzes them. The query is pertinent: Why, of the total number of physicians in this country, are there only 90,056 members of county societies and why are only 56.8 per cent. of these county society members Fellows of the American Medical Association? Is not the answer lack of acquaintanceship? Acquaintanceship with the principles and purpose that our organizations are based on and what they are attempting and how they are and

can be of greater value to the individual physician if he but knew—had acquaintanceship with our work and more intimate contact with that which is being done. You and certain others know what we are striving for. Now reflect on that large number of practitioners who are totally ignorant, uninformed and misinformed. Go back to your own state, your own county, your own city and recall how many of the physicians that you are in more or less contact with who are in great ignorance regarding the work of your state society and who know nothing as to the American Medical Association.

There can be no argument as to our plan of organization, what has been attained and our future quests. We who know are justly proud of it. We point with proper pride to that which has been wrought, to the efforts that have been expended and to the splendid manner in which our officers and executives have performed the duties that have been entrusted to them. We are elated with these headquarters and the spirit that emanates from them. But—we are in a minority, for 50,000 physicians are uninformed on the subject, and among the 90,056 physicians who are members of state societies some 40,000 are in partial or complete ignorance. Were this ignorance dispelled, I am certain that our state and national membership enrollment would advance to if not exceed the 100,000 mark. I hasten at this time to add that I am not advancing numerical membership as the final and most desired end of organization. Numerical strength is not and should not be our goal. Numerical strength should be sought only as an index that attests to the justification of existence. I might continue to enlarge further on this first foundation principle of acquaintanceship, for it lends itself to broad interpretation and application. I shall desist doing so and concern myself from now on with its application to being our definite program for 1925.

How shall it be applied? Here again I



shall for brevity's sake set forth in table form:

Acquaintanceship—to bring about understanding.

A. Of the American Medical Association:

1. Its history and development.
2. Plan of organization, its constitution and by-laws.
3. Administration:
  - (a) Official personnel.
  - (b) Headquarters.
  - (c) Work and achievements.
  - (d) Service it renders to the physician.
4. The Journal and other publications.
5. Requirements for Fellowship.
6. Benefits of Fellowship.

B. State society:

1. Organization.
2. Officers and council.
3. Activities.
4. Membership relationship.
5. Membership qualifications and benefits.

C. Individual responsibility to:

- (a) County, state and A. M. A. organizations.
- (b) Fellow practitioners.
- (c) Community.
- (d) Humanity.

This is the definite program that I submit for 1925. That we as state officers and editors of medical journals convey this information, this knowledge, if you so please to term it, to the physicians of this country. In developing this acquaintanceship the result that is bound to ensue is an increase of numerical strength that will be an index to apply the four basic principles that have been advanced. It will be promptly perceived that this acquaintanceship will eventually produce results that more nearly express the ends that are being sought.

To that end, then, do I proffer this program:

First: That as we return to our home states we pledge ourselves to concentrate, so far as possible, in causing the medical men of our state to become fully informed and acquainted with all that medical or-

ganization as represented by our county, state and American Medical Association is and stands for and what it is doing.

Second: That this information be continuously distributed and conveyed to the informed and uninformed by means of:

A. Special articles, editorials, comments and advertisements appearing in each issue of our state publication.

B. That county secretaries be requested to act as local representatives for their counties and that they be supplied with application blanks for membership.

C. That, as we send certificates for 1925 state membership we include a plea and application for A. M. A. Fellowship.

D. Through such other avenues as may be determined.

Three: That we solicit Fellowship affiliation. Means and methods will suggest themselves as we become enthusiastic in this program and as we apply ourselves to its institution. One avenue that merits our thoughtful consideration is the county society unit. Have we not been neglecting state interest in our county societies, and is that not the reason why each state organization has a varying number of county societies that are dead or exist in name only? We need a greater acquaintance and a more intimate one with our county societies and their officers. We must manifest more interest in their activities and we greatly need to rejuvenate their spirit of work. In our 1925 program we must not lose sight of the county society, and we may well utilize this avenue for a greater application of our purpose to establish acquaintanceship.

I would also suggest that our national Secretary cause to be compiled a concrete tabulation of the activities that emanate from national headquarters, including our councils, bureaus, publications, laboratory, directory and full-time executives. That this tabulation be imparted to our state membership in the most effective manner.

My final recommendation is that this conference pledge itself to this program and that we individually sincerely determine that

we will go forth and by our zeal and effort cause 1925 to witness our bringing to the graduate doctors of medicine of this country a full degree of information that will firmly establish an acquaintanceship with our medical organizations that will beget an understanding in such full degree as will cause them to enroll as members and thus attain in a greater degree that which we have announced as the objects that govern our federacy.

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### DEVELOPMENT OF MEDICAL EDUCATION IN THE UNITED STATES

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*N. P. Colwell, M. D., Secretary of the Council on Medical Education and Hospitals of the American Medical Association.*

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Prior to 1765 students from America necessarily went abroad for their medical education, mainly to the medical schools of Edinburgh, London and Paris. Between 1765 and 1825, however, nineteen medical schools were organized in this country, thirteen of which are still existing. These, as they are now known, and the years when they were organized, are the medical schools of the University of Pennsylvania, 1765; Columbia, 1767; Harvard, 1782; Dartmouth, 1797; University of Maryland, 1807; Yale, 1813; Louisville, 1817; Cincinnati, 1819; Vermont, 1822; and the Medical College of the State of South Carolina, 1824. In 1825 there were three medical colleges organized which are still existing—those of Columbian University, Washington, D. C., now the George Washington University, Jefferson Medical College and the University of Virginia.

The Medical College of the State of South Carolina, therefore, was the sixteenth medical school organized in the United

States, or the tenth of those which are still existing.

After 1800 the number of medical schools was rapidly increased until in 1860 there were sixty-five medical schools. During the Civil War, nineteen medical schools were suspended twelve of which resumed teaching in 1865. Thereafter, the number of medical schools was rapidly multiplied, reaching 100 in 1880 and 160 in 1900. The highest number was 162 in 1906. These figures do not include about twenty institutions which were exposed as diploma-mills and several others which were organized but never held classes.

### MEDICAL INSTRUCTION

The early course of medical instruction extended over two annual sessions of about 6 months each, these being in two separate calendar years. This time was quite ample for a review of the knowledge of medicine available at that time. The more important part of the student's instruction, perhaps, was the time spent with a preceptor in the actual observation of patients and the methods followed by his preceptor, not only in diagnoses and treatment, but in the making and collecting his fees. Text books and lectures at that time dealt mainly with theories based on the observation of patients and the results of various methods of treatment employed. For centuries all the knowledge of medicine that was available consisted of collections of empirical data, the reliability of which varied considerably. Physicians then had to depend largely on their unaided senses, but nevertheless, frequently attained great skill in the description, recognition, prognosis and treatment of diseases. Indeed, an article published just recently includes a significant statement that diagnoses in tuberculosis are often not so good today "because of too great dependence on roentgenray evidence." 2.

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Read at the Centennial celebration of the One Hundredth Anniversary of the founding of the Medical College of the State of South Carolina, Charleston, S. C., November 11th, 12th, 1924.

2. "The Ex-Service Man and His Lungs," Journal, American Medical Association, November 8, 1924, page 1490.

In some of the earliest medical schools high standards of preliminary education were required. Of the physicians graduated by Harvard up to and including 1840, 65 per cent. also held baccalaureate degrees. A college degree was at first required for admission to the medical school of the College of Philadelphia. With the rapid expansion of the country, however, the frontier was being pushed rapidly westward, new towns and cities sprang up and the demand for physicians was greatly increased. Medical schools rapidly multiplied, including many of which were scantily equipped, having no laboratories and no hospitals; some did not even require dissection and entrance requirements were nominal, or lacking. Many of these colleges were conducted for the profit of their owners. With such competition, it was difficult for the better schools to continue their higher entrance requirements so that, even in these, all students admitted were not required to possess a college education.

Nevertheless, some of the better medical schools continued to attract many students who possessed degrees in arts or science and who in a few colleges at least constituted a majority of their enrollments.

The number of medical colleges increased more rapidly than the population, and the supply of physicians soon far exceeded the demand. By 1880 the United States had 1 physician for every 560 \* people,—two or three times as many as were found in other countries.

It was well known among physicians, and especially those who were familiar with medical education in Europe, that most of the medical schools of the United States had lower entrance requirements and in many other respects were decidedly inferior to those abroad. With a few exceptions, the course of instruction was ungraded, one course of lectures being given alike to the students of the two classes. The value of the lectures depended on the actual knowledge and teaching ability of the lecturer. Occasionally, there were teachers of rare

ability who, in spite of their handicaps, developed a high degree of skill in diagnosis and treatment, as well as ability to impart knowledge and, fortunately, many students were attracted to the colleges with which these teachers were connected.

But the demand for improvements in medical education was not lacking. In 1846, when the American Medical Association was organized, its chief object was the improvement of medical education in the United States. At its annual meetings papers were frequently presented calling attention to the serious conditions existing and demanding improvement. At different times special committees were appointed who, after thorough investigations, presented exhaustive reports, but without marked results. This agitation, however, led in the early 60's to the gradual development of the graded course of instruction.

Ranch, reports of the Illinois State Board of Health.

Unfortunately the demands for improvement were not given persistent publicity, and conditions actually became worse. During the 70's there were organized—mostly legally chartered—a stream of medical schools without laboratories, without teachers and without dispensaries and hospitals. Some, indeed, were without classes but were engaged in the actual sale of diplomas.

THE ILLINOIS STATE BOARD OF HEALTH

The first effective and persistent influence toward improvement occurred in the early 80's through work carried on by the Illinois State Board of Health under the direction of Dr. John H. Rauch, who for twenty-one years continuously was its executive officer. Through the collection of exact information in regard to the medical schools, Dr. Rauch exposed a score or more of diploma-mills and refused to examine the graduates of several low grade medical schools. As an essential for "recognition" medical colleges were required to insist on a high school education for admission and to stop the practice of some of them of grad-

\* Ranch, reports of the Illinois State Board of Health.



uating two classes in one calendar year. The requirement for the degree was increased in 1878 from two sessions with only one required course of lectures, to three college years with two required courses of lectures. In about 1890 the course was further increased to include three courses of lectures, and in 1897 to four full courses of lectures.

The statistics collected and the reports published by the Illinois State Board of Health constitute the most reliable source of information in regard to medical colleges and medical education during the twenty years prior to 1900.

Meanwhile, the history of this Board presents one of the most flagrant instances of the bad effects of political changes on the enforcement of fair standards of medical education and licensure. A complete change in party control in the Illinois election of 1892, resulted in dropping all but one member of the Board, including an able and efficient secretary who had succeeded Dr. Rauch following the latter's resignation in 1891. Prior to that time the influence of the Board had been nationwide, and its methods and standards were being followed in many other states. The sweeping change in the personnel of the Board, however, resulted not only in a diminution of the Board's influence, but also in the adoption of several retrogressive measures. A score or more of low grade colleges from which recognition had been persistently withheld, were soon granted full recognition in Illinois; several individual physicians, who for clearly stated reasons had been refused licenses in the state, were soon enabled to obtain them; itinerant practitioners, who formerly had been persistently refused permits to practice in the state, were soon collecting fees from a credulous public. With the removal of the powerful control formerly exerted by the Board, a tidal wave of inferior medical schools swept the United States into its darkest period in medical education. This country then had more than half of the world's supply of medical colleges, most

of which, however, were low grade institutions. But the darkness proved to be that just before the dawn,—the rapid advancement toward better conditions.

#### SYSTEMATIC WORK BY THE AMERICAN MEDICAL ASSOCIATION

In 1900, the Journal of the American Medical Association under the able editorship of Dr. George H. Simmons, began the collection of data in regard to medical colleges, students and graduates and in 1901 the first educational number of the Journal was published. In 1903 the collection of data regarding state licensing board examinations was begun and each year thereafter the state board number of the Journal was published. In 1903, also, another special committee on medical education made a report to the American Medical Association quite like those of similar committees in earlier years. This time, however, the report recommended the creation of a permanent committee, the Council on Medical Education, the one purpose of which was to work for the improvement of medical education.

At the beginning of its work the Council established two educational standards; one for immediate adoption, urging a four year high school education as the minimum requirement for admission to the regular four year medical course, and an "ideal standard" which urged that the entrance requirement be later increased to one year of college work. The Council also began its annual conferences which helped to secure a hearty cooperation between the several agencies working to improve medical education, these organizations being the Association of American Medical Colleges, the American Academy of Medicine and the American and National Confederations of State Medical Examining and Licensing Boards. 3. The Council's first survey of medical schools was made during 1906-07

3. In 1912 these two confederations merged to form the present Federation of State Medical Boards of the United States.

and the first classification was made. This was not published, but each institution was informed regarding its grade. The Council also urged the merging of medical schools in cities where two or more were existing so that one better equipped college might result.

By 1910 the total number of medical schools had been reduced, largely by mergers, from 162 to 131 and of these 40 had adopted the requirement of admission of one or more years of college work. These improvements would have been impossible except for the remarkable support which the Council received from the majority of medical schools and the state licensing boards.

In 1909-10 the second survey of all medical schools was made, this being a joint survey by representatives of the Council and of the Carnegie Foundation for the Advancement of Teaching.

#### THE CARNEGIE REPORT

In 1910 the Council published its second classification of medical schools and the Carnegie Foundation issued its memorable report on "Medical Education in the United States and Canada." It is pleasing to note that the great improvements in medical education began with the efforts of medical educators and the organized medical profession to put their own house in order and that much progress had been made prior to the investigation made by the Carnegie Foundation. This statement, is not intended to minimize in any way the tremendous good which resulted from the Foundation's report which it gave a wider publicity to the great need for improvements in medical education and for finances by which medical schools could secure an adequate supply of teachers, laboratories, hospitals and other essentials.

#### HIGHER ENTRANCE REQUIREMENTS

The Council's ideal standard called for the general adoption, in 1910, of a year of college work, including courses in physics,

chemistry and biology. This standard was not made an essential for the Class A rating, however, until in 1914 when 78 of the 106 medical colleges then existing had adopted this or higher entrance qualifications. By that time, also, it was clear that the one year of college work was to be merely a step toward a later requirement of two years of college work and this was made an essential for the Class A rating in 1918. 4. Through the merging of medical schools and the closing outright of a score or more of inferior institutions, the number of medical schools had by that time been reduced to 90, but 80 of these had adopted two or more years of college work as their minimum entrance requirement. This change brought the educational standards of medical schools in the United States on a par, at least, with those required in other leading nations of the world. At that time, in order to prevent any extreme measures, the American Medical Association adopted a resolution declaring that, in its opinion, no higher requirement should be insisted on for all medical schools in the United States.

#### SMALLER QUANTITY BUT BETTER QUALITY

When the campaign for improvement began a decided decrease in the number of colleges, students and graduates was expected.

The lowest point in the enrollment of medical schools was not reached until in 1919 when the total number of students had fallen from 28,142 (in 1904) to 12,930. Since then, however, in spite of higher requirements, the enrollments have increased

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4. The main reasons for the establishing of the two year requirements were: (a) colleges of liberal arts and sciences did not care to disarrange their regular schedules in order to provide for the one year of instruction; (b) the one year was considered too short a time in which to complete three heavy science courses with the required laboratory instruction, and (c) many of the university medical schools had provided a combined course of six years, whereby after the two premedical years and the first two years of medicine, the student could obtain a B. S. degree, and two years later his M. D. degree. Many students, therefore, voluntarily took the two premedical years so as to secure the additional degree. The one year premedical course where given by non-university medical schools, also, had proved to be unsatisfactory.

by a thousand or more students each year. In 1923-24 there were 17,728 and present figures indicate an enrollment of over 18,000 in the present session. The number of graduates, likewise, was reduced from 5,747 in 1904 to 2,529 (the war class) in 1922. Instead of only 1,761 students (6.2 per cent.) enrolled in the higher grade colleges in 1904, there were 16,775 (94.7 per cent.) in 1924. Since 1922 the number of graduates has been increasing by a few hundreds each year, the number in 1924 having been 3,562, including 3,458 (97 per cent.) from the better medical schools. Judging from the larger classes enrolled, the numbers graduating during the next few years will increase to approximately 4,700 in 1927, which will be the largest number graduated since 1908. Thus in five years the increase in the numbers graduating will be greater than the reduction which took place in 14 years. The increase, therefore, was nearly three times more rapid than the decrease and over 90 per cent. of these larger numbers are better qualified medical students. Instead of only 369 (6.4 per cent.) graduating from the higher medical schools in 1903, however, there were 2,347 (92.8 per cent.) who graduated from such schools in 1922.

The number of medical schools has been reduced from 162 in 1906, when the United States had over half of the World's supply, to 79 in 1924. Where there were only 4 (2.5 per cent.) medical schools in 1904 requiring any college work for admission, in 1924, 73 (92.4 per cent.) were forcing the higher entrance requirements.

#### OTHER MARKED IMPROVEMENTS

Besides the increase in entrance requirements since 1900, however, the medical schools have undergone tremendous improvement in other respects.

(a) There has been a great increase in the number, size and character of medical school buildings.

(b) Endowments for medical education

have been increased from a few thousands to millions of dollars.

(c) All medical schools have larger numbers of well equipped laboratories.

(d) There has been a remarkable increase in the number of full-time expert teachers.

(e) Most of the medical schools are centers of active and efficient medical research.

(f) Closer relationships have been established with dispensaries and hospitals by which the supply of clinical facilities has been enlarged and, finally.

(g) Greatly improved methods of instruction in both laboratory and clinical departments have been generally adopted.

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1. In their numerical order and the dates when they were organized, the nineteen medical colleges are as follows:

1. College of Philadelphia Medical Department, now the University of Pennsylvania Medical School, 1765.

2. King's College Medical Faculty, now the Columbia University College of Physicians and Surgeons, 1767.

3. Harvard Medical School, 1782.

4. Dartmouth Medical School, 1797.

5. University of Maryland, 1807.

6. College of the City of New York, 1807. It merged with Columbia College Medical School in 1814.

7. Brown University, organized in 1811. It was closed in 1827.

8. College of Physicians and Surgeons of the Western District of New York, organized in 1812, closed in 1840.

9. Yale Medical School, instruction begun in 1813.

10. Kentucky School of Medicine, organized in 1817. It merged with the University of Louisville Medical School in 1908.



11. Castleton Medical College, organized in 1819. Became extinct in 1861.

12. Medical College of Ohio, organized in 1819. In 1909 it merged with the University of Cincinnati.

13. Medical School of Maine, organized 1820, closed in 1921.

14. University of Vermont, organized in 1822.

15. Berkshire Medical College, organized in 1823, closed in 1867.

16. Medical College of the State of South Carolina, began teaching in 1824.

17. Columbian University, Washington, D. C., now George Washington University, organized in 1825.

18. Jefferson Medical College, organized in 1825.

19. University of Virginia School of Medicine, organized 1825.

By this time the College of Physicians and Surgeons of the City of New York and the Columbia University Medical Faculty had merged, leaving eighteen medical schools in existence.

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## PROSTATIC SURGERY—RECENT

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*By N. Bruce Edgerton, M. D., Columbia, S. C.*

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In 1898 Hugh Young did a supra-pubic drainage on account of failure in an attempt to catheterize an aged man suffering from complete prostatic obstruction; and two weeks later his patient had made such marked improvement that he successfully removed an enlarged prostate. He reported his results in 1899 and since that date preliminary drainage has been used as a part of the preparation in prostatic surgery.

Read before the South Carolina Medical Association, Orangeburg, S. C., April 16, 1924.

They may be drained either by intermittent catheterization or an indwelling catheter, or by a supra-pubic tube. The period of drainage should depend on the condition of the patient—the average case a week or two, an occasional case a month or more. Drainage and forced fluids should continue until the peak of improvement has been reached. Drainage thru an indwelling catheter is preferred by us in this type of surgery.

In 1909 Rowntree and Geraghty presented a paper on the value of phenolsulphonephthalein in the estimation of kidney function. Since that time this red dye test has been accepted universally as an accurate method of estimating kidney efficiency. We can not say that a certain percentage elimination shall be obtained before a prostatectomy should be done. In 50 cases we have not operated until at least a 30% dye elimination had been secured. We consider a 30% function safe.

Since about 1913 an estimation of the retained blood urea has been a part of the routine in hospitals equipped for this sort of laboratory work. The retained blood urea varies in an inverse ratio with the phthalein percentage elimination—with a high phthalein output a low blood urea is the rule. In May 1923 Dr. Hench, of the Mayo Clinic, presented before the American Urological Association the result of extended laboratory investigation, by himself and Miss Aldrich, concerning the estimation of salivary urea and a formula for conversion into terms of blood urea. This test is a simple office test and may be used by any of us not only in estimating urea retention due to prostatic obstruction and the resulting kidney insufficiency, but in kidney destruction due to cardio-vascular disease, pregnancy, or any condition in which kidney insufficiency is suspected.

## SALIVARY UREA ESTIMATION

Method of estimating Salivary Urea and a formula for conversion into terms of blood urea.

Two solutions are needed.

Saturated solution of Bicarb. Soda.

5% solution Biclride Mercury.

Equipment is simple.

Burette, paraffin, white piece china, and two medicine droppers.

In order to stimulate salivary flow have patient chew a piece of paraffin and collect two spec. of saliva of 8 c. c. each—1st. check spec. 2nd. Test spec. Estimation is made using 5 c. c. test spec.

Dr. Hench and Miss Aldrich found in their experimental work certain fixed scientific facts on which the test is based.

That 1 1-2 c. c. bicloride mercury (5%) is sufficient to neutralize the urea and ammonia contained in 5 c. c. saliva.

That when equal parts of the soda and mercury solution were mixed a brown color resulted. This they use as the color scale and indicator.

That as soon as sufficient mercury is added to the saliva to leave uncombined mercury one drop of the mixture added to the soda will produce the brown color and their end point.

That the normal salivary urea index varies between 30-50 in different individuals and at different times in the same individual.

#### THE TEST

Put 5 c. c. saliva in cup and run in 1 1-2 c. c. bicloride, then put in the bicloride drop by drop until 6 or 8 additional drops have been added. Then one drop of the mixture is mixed with soda and when the brown color appears after the mixture the end point has been reached.

Example—Say we used 2 c. c. before the brown color appeared our calculation will result as follows: On a basis of 100 c. c. our salivary urea index would be 40.

Formula—B. U. equals; S. U. I. times I. 43 equals 34 therefore B. U. equals 20 Mil. per 100 c. c. blood.

After the aged man has been advanced to the height of his improvement the question of anesthesia is the consideration. Ether, gas and oxygen, spinal and sacral anesthe-

sia are the methods commonly used. Since the development and adoption of such precise ideas and methods of preparation ether as an anesthetic has been safely used in a large number of operations by men doing prostatic surgery all over the world. The anesthetist must be especially trained for the other types of anesthesia. Special training is essential in either of the other types of anesthesia and particularly in spinal and sacral management. Gas and Oxygen has proven safer, when administered by a trained anesthetist, than has ether.

Spinal anesthesia in the hands of those accustomed to its use seems safe. It is used much more extensively in Europe than in America. J. Thomson Walker uses Novocain intraspinally in all of his prostatectomies and he is the most prominent English Urological surgeon. Chute and Dr. George Gilbert Smith use spinal anesthesia in all of their operations on the lower half of the urinary tract. These two men represent the best talent in Boston. Case of Battle Creek advocates and uses this method in all operations below the umbilicus requiring more than 20 minutes for completion. Babcock of Philadelphia is an exponent of the method. Gaston Labat the Frenchman who was special lecturer at the Mayo Clinic for two years on Regional anesthesia says that with knowledge of the method all fear is dissipated. My experience is limited to six cases. In all of these cases we had complete anesthesia but in two vaso-motor collapse occurred with recovery after the administration of adrenalin intravenously. Our first case is worthy of mention. Mr. W. age 67—referred by Dr. J. S. M. had been bed ridden for six months as the result of a complete hemiplegia. He had so completely lost his sense of equilibrium that had to keep twelve inch board fastened to each side of his bed to allay his fear of falling off the bed. He was admitted to the Columbia Hospital suffering from complete retention of urine the result of an enlarged prostate. His systolic blood pressure was 210 and his pulse

rate was never under 110. We did a preliminary suprapubic drainage and after two weeks proceeded with a spinal anesthesia using 2 c. c. of a 5% sol. novocain injected into the spinal canal between the third and fourth lumbar vertebra. In twelve minutes there was complete anesthesia below the site of injection and we proceeded with the operation. He suffered no shock, pain or discomfort of any sort during the operation and left the operating room after completion of the scheduled work in as good shape as when he entered. He did not have nausea or vomiting or headache after returning to his room and was able to take fluids immediately—a part of the treatment so necessary in these cases. His convalescence was without incident except trouble in inducing him to allow the boards to be removed from his bed. It was time consuming on the part of the nurses and attendants to persuade him that they could prevent him from falling from the rolling chair. In three months after leaving the hospital he was walking about the streets of his town with the aid of a cane. Our feeling is that either ether or gas and oxygen would probably have killed him. We feel that spinal anesthesia has a place in surgery and that Labat is right in saying that acquaintance with the method dissipates the fear. A blood pressure of 100 systolic according to Labat is the only contra indication to its use.

The safest method of anesthesia in prostatic surgery is the sacral, trans-sacral, or pre sacral method. This method consists in the injection through the sacral foramina located on either side of the sacrum the five pairs of sacral nerves, and the filling up of the triangular caudal space with a 2% sol. of novocain and infiltration of the abdominal wall with a 1-2% sol. of novocain. We have studied and practiced the method on the cadaver and have used the caudal as an office method of anesthesia. It is perfect for the crushing of bladder stones, for difficult cystoscopy, the removal of ureteral stones, and the dilatations of strictures. It

does not interfere with motion and patients may leave the office on their own responsibility.

We have used the complete sacral in two cases only, in one of these anesthesia was complete—the failure was due to improper injection. The method has been received eagerly by our most prominent Urological surgeons and at the last meeting of our national association demonstrations of the method were largely attended and the comments were most favorable. It is certainly entrenched as a safe method of anesthesia in prostatic surgery.

Bleeding after prostatectomy has been one of the chief dangers of the operation until Hagner of Washington demonstrated how efficiently his prostatic bag would control the hemorrhage. We began using his method in 1918 and in the six years no case has died as the result of bleeding. Pilcher of Brooklyn has modified Hagners bag and although more convenient is no more efficient. Either bag will control the bleeding if the torn edges of the capsule are carefully invaginated under the bag. We use in combination with bag hemostasis a large Pezzar catheter drain which is comfortable for the patient and efficient in drainage.

We would urge that the prostatic be operated upon early, however with the present day method the most dangerous risk may by careful attention be advanced to among the reasonably safe risks.

#### DISCUSSION

DR. C. A. MOBLEY, (Orangeburg):

I think Doctor Edgerton has covered the subject in a complete manner. Prostatic surgery has been a branch of surgery in which I have been deeply interested, and I feel that there is one thing that should be stressed, and that is that we should not allow these prostatic cases, after we find they rise several times at night, to go until they get to the point of complete retention before we advise operation. After the bladder has a certain amount of residual urine the back pressure upon the kidney begins to take place, and finally if operation is not advised



early some of these patients come to operation, when they finally make up their mind they cannot do anything else, and we find the kidney so badly damaged that we have a very poor risk to deal with. I think that is one of the most important things for us to consider. We should look at these patients as if they were acute appendix cases. We all know the only cure for an acute appendicitis is surgery, and there is only one cure for enlarged prostate, and that is surgery.

In making routine examination of the prostate, I think it depends largely upon the judgment of the urologist as to whether you use the cystoscope or not. I believe a great many cases will be damaged by the use of the cystoscope. Of course it is preferable where you can use the cystoscope to get an accurate knowledge of the position and size of the gland.

The method Doctor Edgerton outlines for the control of hemorrhage is the Hagner bag. One of the best methods to make it unnecessary to use the Hagner bag is treatment preliminary to the enucleation of the prostate. I believe in decompression of the kidney by catheter drainage through the urethra for a few days before cystoscopy under local anesthesia, using procain, and then continuing the drainage through the suprapubic cavity until the patient's blood urea presents a good picture. I do not think you can state any particular percentage of phthalein as an index for operation. One patient may have a low index, and you might lose the next patient with the same phthalein. But if you get that patient up to his individual maximum you have done all you can do in his particular case. If when you bring it up to 20 per cent. you find his musculature is good, appetite fair, specific gravity not below a certain point, he probably is a safe surgical risk.

Regarding the anesthetic, I do not believe it makes very much difference about the anesthetic given at the time of the removal of the prostate. Personally, I always use ether. Of course we do a preliminary drainage under novocaine, and then we give a little ether and enucleate the prostate in a few minutes. I do not use the Hagner bag unless I have a bad hemorrhage, and I believe long preliminary drainage before the prostatectomy will diminish the congestion of the gland, and that we will have hemorrhage in a fewer number of cases.

DR. GEORGE T. TYLER, (Greenville):

I did not hear all of the paper, but that part referring to anesthesia is of especial interest to me. I have done a good deal of spinal anesthesia, and I find it works very well. At one time I used it for abdominal and pelvic work, and then I gave it up. Finally I came back to it and am still using it. I have found it very safe and I feel that the more it is used, with proper caution, the better results we will get from it. A short time ago it was my custom to remove a prostate by the suprapubic method, and in order not to insert the novocaine too high we went between the fourth and fifth lumbar vertebrae. I know that is too low to induce anesthesia in the abdominal muscles, but following that we anesthetize thoroughly the abdominal muscles and you can then make an incision and expose the bladder and remove the prostate suprapubically without any trouble.

The method of caudal anesthesia is excellent. I am using that more and more for perineal work, and am supplementing that, if necessary, by injection of the abdominal muscles, anesthetizing the perineum and making it perfectly safe and easy to go into the bladder. Once the bladder is opened anesthesia by the caudal route has accomplished all that is necessary in the neck of the bladder.

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DR. M. H. WYMAN, (Columbia):

Dr. Edgerton has covered this subject thoroughly from the urologist's point of view. The actual removal of the gland tissue is the comparatively easy part of the management of prostatic cases. The hard part of course is the preparation of the patient, and the different things that the Doctor so well brought out.

In a majority of cases I follow the suprapubic route. There is some advantage in operating by the suprapubic route for drainage. First, the man gets immunity—he vaccinates himself against infection in the bladder, and shock is prevented in the final enucleation of the gland a week or two later.

The functional tests that the Doctor brought out should be very thorough. The phthalein test gives you accurate information relative to the kidney function.

There has been a great deal said lately about four-wheel brakes on automobiles. It is a serious problem. I do not think anesthesia in this question is a serious problem, because spinal or caudal in the hands of an

expert is safe. But I think it makes a little more complicated case when there is congestion. But you can do the preliminary stage without pain, and then a week later when you enucleate the prostate a little gas will not hurt the patient very much.

The method Doctor Edgerton refers to for the control of hemorrhage has been a serious matter. The bag is a great advantage over the old method of packing with gauze, because when you remove the gauze you leave a raw surface that is apt to bleed again. When the bag is removed you never have any hemorrhage.

DR. GIDEON TIMBERLAKE, (Greenville):

I was very much interested in Doctor Edgerton's discussion of anesthesia. Personally, I have not used regional anesthesia. Being a hard-shelled Baptist I believe in water, and I cannot get away from the fact that what is called old-time religion is very essential. I do not feel that the prostate should be removed just because it exists as such. Contrariwise, I accept Doctor Mobley's views that there are selected cases that should be governed entirely and almost exclusively according to conditions. If such-and-such things are true, then we will resort to this or that. He does not use the Hagner bag—perhaps for the reason I do not—because I do not have one.

As to the phthalein output he suggests that under certain conditions you have a very low phthalein output. That is true. But you should always check this up by the blood content and nitrogenous products.

All prostatectomies are not necessarily done suprapubically. In the heavy cases—a man with a great deal of fat and a fibrinous abdomen, you have to decide on the suprapubic route. If there are chronic or malignant processes, they are for the most part to be attracted by the infrapubic route. Where there is a benign tumor or adenoma, it should be attracted suprapubically. But to say that that thing must be done by a route to conform to some convention laid down by some man—it is all right, but you lose your individuality.

I am quite in accord with Doctor Edgerton's views, but I feel frankly that we should be able to do good surgery under general anesthesia before we undertake to do experimental surgery under something more mod-

ern. I am not discouraging it by any means. His quota is very good. But for my own part, due to my lack of opportunity and ignorance, I have not used regional anesthesia. I feel that Doctor Edgerton should be encouraged by every member of the Society to try to further the cause of urology.

DR. N. BRUCE EDGERTON, (closing):

Doctor Mobley has better luck with hemorrhage than we have seen in the work with which we have been associated and that which we have done ourselves. The blood pressure usually falls after the administration of ether, but after these aged men recover from this shock the blood pressure begins to rise again, and in all of these cases we feel much safer to have the simple apparatus which we have discussed in the bladder filled with fluid than to have nothing there. It does not do any harm, it is simple to put in, it controls the bleeding, the fluid can be let out at any time three or four hours after the operation, and if the hemorrhage starts you can put the bag back into the duct in which the bleeding is occurring and control it the second time.

In regard to anesthesia, there is practically no shock with this anesthesia, provided we properly give morphine and the patient is properly prepared. An anesthesia which lasts one hour without shock certainly seems to us to be a very good thing to use. In suprapubic prostatectomy the torn edges of the capsule are trimmed off—not a blind operation as Doctor Timberlake has referred, but an open operation with the retractor in the bladder so you can see what you are doing. Unless it is properly done bands and adhesions form and later on you have interference with the flow of urine. This has been beautifully presented and illustrated in an article in the *Lancet* by J. Thompson Walker of England. For that reason I feel that where we have opportunity on the cadaver we should try to practice and be able to use this anesthesia as it should be used. We use ether and gas and oxygen. With both of them you have a limit of time to do the operation and get the patient back to bed. With the other you do not add to the shock, and you can take your time and do not feel hurried because you know the anesthesia will last a certain time and not increase the amount of shock.

## RABIES

*By G. McF. Mood, M. D., City Bacterologist, Charleston, S. C.*

Rabies, as it is called in the dog, and Hydrophobia as it is usually spoken of in the human being, with various synonyms, names used in various countries where the disease occurs, is, "an acute infectious disease of mammals, caused by a specific virus and communicated to susceptible animals by the saliva of an infected animal coming in contact with a broken surface, usually through a bite." The virus itself is harmless when ingested, provided the mucosa (the gums, mouth and throat) are intact. The gastric juice has a pronounced deleterious effect upon it.

As the specific organism which causes the disease is in the saliva, the disease may be caused by licking, provided there are fissures or open wounds upon the skin.

Rabies is probably one of the oldest diseases in existence, but because of the occurrence of so few human cases, and because the disease develops so long after the bite, its source was for a long time unknown, and it was not recognized as a separate disease. The disease was first mentioned by Aristotle about 300 B. C., in whose writings it is spoken of as purely an animal disease, and transferred from one animal to another by biting.

Although the disease is mentioned in writings over a period of several centuries, nothing of value was observed or recorded, until 1880, when Pasteur discovered the fact, that the disease may be prevented by inoculating increasing doses of the virus into the person or animal bitten. It may be, as suggested by Fitzgerald, that Pasteur conceived the idea of attenuating the virus and using it as a vaccine, upon the basis of Jenner's work (Jenner having made his crucial experiments with attenuated small pox virus only four years before.)

The causative organism of this peculiar disease is a Protozoon, discovered by Negri

of Pavia in 1903. The organism has been named *Neurorhynchus Hydrophobiae*, but is generally spoken of as a Negri Body. They occur chiefly in the large nerve cells of the Hypocampus Major, and in the large cells of the Cerebellum. They are constantly present in the saliva, the salivary glands containing them before they reach the brain and establish symptoms of the disease in the dog. The disease has been present in all parts of the world with the exception of Australia, on account of the majority of their native animals being marsupials, and on account of the strict dog quarantine laws, which have been in force for years. It has been observed as far north as Greenland, and as far south as the Philippine Islands. It is practically extinct in the Scandinavian Countries, and has, on several occasions been practically banished from England. At the end of the war it was reintroduced into this country in police dogs taken in air machines. It is found in nearly all the States of the United States. In 1890, 143 human deaths from this disease were reported from 30 of the 48 States.

Since it is primarily an animal disease, it is interesting to note its prevalence in different species:

First, Dogs. Fitzgerald states that 80 to 90 per cent of all cases occur in the dog.

Second, Cats:—Third, Cattle, and next in order, horses, swine, goats, wolves, jackals, foxes, sheep. Birds occasionally contract and die of the disease.

Again, there is no constant and characteristic seasonal incidence, as was formerly assumed, viz. "Dog Days." It is quite true that there are apt to be more cases of the disease during certain periods of the year when dogs are running together, but, it is of importance to note, that the disease is more virulent during the cold months. The disease is remarkable on account of its high mortality—100%. No authentic recovery being known after symptoms have developed. Another peculiarity, is the period of incubation, that is, the time elapsing be-



tween the inception of the bite, and the occurrence of the symptoms of the disease. This period is more variable and more prolonged than that of any other acute infection. The period of incubation varies not only in animals of the same species, but in the different species, thus (Rosenau):

Species.	Average incubation period.
Man	14 days to one or more years, average 40 days. May be reduced to 11 days in children.
Dog	21-40 days
Horse	28-56 days
Cow	28-56 days
Pig	14-21 days
Goat and sheep	21-28 days
Birds	14-40 days

The period of incubation depends largely upon the location of the wound, whether upon a clothed or an unclothed area, the relation to nerves (whether the tissue is rich in nerves), the amount and virulence of the virus, and the nearness to or distance from the central nervous system. As dogs and cats, and most carnivorous animals have very sharp and very smooth teeth, bites through clothing are less apt to be infected, and this will vary with the thickness of the clothing, the saliva containing the virus being wiped off. In the same way, animals with thick and long fur are less apt to contract the disease after being bitten. As the active principle travels from the periphery through the nerves only, the nearer the wound to the brain, the shorter the incubation period. Face bites are therefore relatively more dangerous than bites upon the extremities.

The active principle occurs in the saliva chiefly, and it may remain here from three to eight days before it reaches the animals brain, and the animal show symptoms of the disease, therefore after a bite has been inflicted, the biting animal should be quarantined and watched for a period of at least eight days, or better, ten days. If well at the termination of this period, the one bitten need not take the preventative treatment, and if this has been begun, it

may be stopped. It is interesting to note that the active principle has been found elsewhere than in the saliva and central nervous system, thus (Rasenau) it may be found in the Adrenal Glands, the Tear Glands, the Vitreous Humor of the eye, the Spermatic Fluid, the Urine, the Lymph Milk, Spinal and ventricular fluids.

It is interesting again to note that the active principle seems to have greater virulence, disease producing power, when in the saliva of certain animals, than in others, the bites of the former being relatively more dangerous than those of the latter, thus:

The most dangerous bite is said to be that of the wolf, next comes that of the cat, then the dog, and in order, the fox, jackal, horse, ass, cow, sheep, pig.

Not every person bitten by a rabid animal develops Rabies. LeBlanc's figures are 16.6%. That is, that only 16 or 17 out of a hundred of those bitten will have the disease. Paltauf in Russia places the figures at 6 to 9%. In America the figures are placed at about 10%.

The virus retains its viability under various adverse conditions, viz. When kept dry at 20-22° C. it dies in 14 days. When kept dry and exposed to the sun, it is killed in 40 hrs. It is quite resistant to putrefaction, and will live for 5-7 days in 5% solution of Carbolic Acid, and for 20 days in a five tenths percent solution. It retains unaltered its virulence for about three months when kept in glycerine and when dried rapidly at a low temperature and kept in vacuo, will retain its activity for 6 months. It is easily destroyed by heat, 50° C. maintained for one hour, or 60° C. for a half hour will destroy it. Extreme cold has no effect upon it.

While the virus retains its viability for a period when dried, it loses to some extent its virulence, and, being noted by Pasteur, was used, and is still used in some laboratories, as the best means of attenuating the virus for vaccine preparation.

The prevention of this disease may be divided into. (1) Treatment of the wound.

- (2) Preventative treatment with vaccine.
- (3) Control of the disease in dogs and cats.

As soon as one is bitten, whether it has or has not been determined that the animal is rabid, the wound should be thoroughly cauterized with fuming Nitric Acid. This is best done with a fine glass rod, or better, fine capillary tube. No matter how extensive the wound, this cauterization should be carefully carried out. In fact, the more extensive the wound, the more care should be taken. As the acid burns intensely, a local or general anesthetic may be used. The proper cauterization may be the determining factor as to whether the disease will or will not develop.

The wound should be cauterized even though it may be 48 hours old, and closed up. It should be opened, and the deepest portions treated. Poor was able to save 45% of experimentally inoculated guinea pigs after 24 hours by the use of nitric acid applications to the wound alone.

The treatment of the disease itself depends upon the fact, that, repeated injections of doses of the virus too small to produce the disease, will gradually bring about in the person or animal treated, sufficient resistance to the disease, to prevent its occurrence. The degree of resistance (immunity) necessary to prevent the disease is reached fifteen days after the last dose of vaccine is given. As in this State, 21 doses are given, over a period of the same number of days, the necessary resistance is reached only upon the 36th. day after treatment is begun. As the incubation period in face bites may be shorter than this time (36 days) some places give a shorter course of treatment in these cases.

When sufficient resistance is not established within the incubation period, there is from 10-17 chances in a hundred of the patient developing the disease. The treatment in itself is not dangerous, and there are no contraindications to its use. The treatment will not cause the disease. Occasionally some local irritation may result from the injection, and may even abscess, but this is

rare. Again, paralysis, usually of a transient form may develop in adults, rarely in children. There have been reported 19 deaths from paralysis following rabies treatments out of 217,774 persons treated.

The most important method of controlling the disease, is to stamp it out in the animal carriers.

As has been stated England is practically free from the disease, and was for some years entirely so. In England, legislation requiring muzzling, leashing and registration of all dogs was passed. All stray or ownerless dogs are destroyed. All dogs brought into the country are quarantined for six months at the owners expense. These methods of control have resulted as follows:—(Fitzgerald).

Before regulations were passed.  
There occurred in 1887—217 cases of Rabies  
There occurred in 1888—166 cases of Rabies  
There occurred in 1889—312 cases of Rabies

Regulations were then enforced with results as follows:

There occurred in 1890—189 cases.  
There occurred in 1891— 79 cases.  
There occurred in 1892— 38 cases.

At this time owing to the activities of Antivivisection, Anti cruelty to Animals and other sentimental organizations, the laws were repealed with the following results:

In 1893 there occurred 93 cases.  
In 1894 there occurred 249 cases.  
In 1895 there occurred 672 cases.

Here common sense dictated a return to the former policy, with results as follows:  
In 1896 there were 438 cases.  
In 1897 there were 151 cases.  
In 1898 there were 9 cases.  
In 1900 there were 0 cases.

After the disease was eradicated (in approximately two years) all laws except registration, quarantine and the destruction of all ownerless dogs were abolished.

Local Conditions—1924.

Dogs examined for Rabies 58 Positive 40.  
Cats examined for Rabies 12 Positive 9.  
Total -----49 positive .

Patients treated at the City Laboratory

for protection against bites of rabid animals, 51. Eight cases are under treatment at this time. All suspicious animals killed were not brought to the laboratory for examination, and all persons bitten were not treated at the laboratory, so that the above statistics are incomplete.

In my opinion, the prevalence of Rabies locally, is serious, especially as regards the spread of the disease to cats, in whom the virus is more virulent than that in the dog, and should be reconed without loss of time, and in a manner which will insure of its being stamped out in as short a time as possible. For the accomplishment of this, I would suggest for your consideration the passage and enforcement of laws embracing the following:

1. Preventative treatment of all dogs in

the city. This vaccination protects the dog against the disease for a period of from one to three years.

2. Registration of all dogs.

3. Require muzzling or leashing of all dogs on the streets as a temporary measure, until control of situation is established.

4. Have all ownerless, and all unmuzzled dogs on streets destroyed.

5. Have all ownerless cats destroyed. (This latter will necessitate night hunting, as cats prowl about mainly at night.)

6. Education of the public to a sympathetic support of these measures.

7. The examination of all dogs and cats destroyed, for evidences of the disease.

8. Quarantine and careful observation of all animals which have bitten human beings.

## SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

### GAS BACILLUS INFECTION

The mortality in war surgery or gas infection of the thigh was 50% and of the leg 33%, even when subjected to the most radical surgical treatment, according to Page, in the Southern Medical Journal in December, 1923.

That author cites two cases, each resulting from compound, comminuted fractures due to railroad accidents.

In each instance the extremity was amputated high above the site of injury, soda bicarbonate was given in dram doses every four hours; the wounds were cleansed with hydrogen peroxide and irrigated constantly with Dakins solution.

Gas Bacillus infection is often a rapidly fatal one. It is due to the Bacillus of Welch or B. aerogenous capsulatus. The bacillus itself is large with square cut ends, non motile and anaerobic. It forms cap-

sules in the animal body; and is found in intestinal contents in the soil or in the dust and dirt of streets and floors.

The most characteristic lesion produced by this bacillus is the emphysematous crackling detected by palpation and due to the formation of gas in the tissues and its retention there.

Upon the human organism this infection manifests itself both locally and systemically.

Systemically, the effect at once is profound. The temperature rapidly rises and may touch 104 or 105. The pulse quickens to 130, 40, or 50, becomes thin, feeble and then runs. At the onset profuse perspiration is not uncommon. Capillary cyanosis is frequently present and delirium, partial or complete, supervenes as the toxemia increases.

Locally, the condition sets in at the site of a wound. It spreads rapidly, pain is



more or less intense, swelling quickly begins, the skin peels off, crackling of the subcutaneous tissues is present, the parts become anesthetic and pulpy; the tissues become pale, friable, necrotic, then completely gangrenous and there is a characteristic odor, due to the formation of the sulphide of hydrogen and ammonium gases.

Clinically, this condition may be confused with the lesion produced by the bacillus of malignant edema. This organism produces extensive edema, some gas formation, necrosis and gangrene. Bacteriologic culture readily differentiates the two.

The writer has had three cases of *Bacillus Welchii* toxemia with gangrene. The first one developed in the abdominal wall to the right of the lower end of an appendiceal operative wound. It started about nine hours after the operation. The patient suddenly developed a rather severe pain, which promptly intensified itself. Within a few moments he was in a profuse sweat with a rising temperature and a running pulse. A small area of crepitation was soon discovered and within an hour it had spread extensively. Multiple incisions were made down to the muscles—through and through drainage was established, and the wounds were cleansed with hydrogen peroxide, constantly applied by moist dressings.

The patient lived and eventually recovered, notwithstanding a pneumonia first on one side and then on the other, both of which were followed by empyema, which of course necessitated further surgical measures.

The second case was that of a male child aged 14 years, who suffered a compound

fracture of both bones of the left forearm. Fifteen hours later the child was crying with pain, and the family physician undid the splint and on manipulation, discovered much swelling around the wound and detected "crackling" beneath the skin.

Free drainage was established promptly, but a few hours later the child was decidedly worse, the edges of the incisions were turning dark, the swelling had extended to above the elbow, and gas was rapidly accumulating—shoulder joint amputation was then performed, and the child eventually recovered.

The third case occurred in a young man, the captain of a high school football team, and apparently followed an abscess of a lower molar in the opposite jaw. It began as a swelling with much pain in the tissues of the neck below the right mandible. Sixteen hours later this swelling burst and a small amount of thin watery discharge exuded.

Within a short time, the edges of this newly formed opening took on a dark color, the boy rapidly grew worse. All local and systemic symptoms pointed conclusively to the diagnosis of emphysematous gangrene.

The entire area was laid wide open by his physicians and the wounds were dressed every fifteen minutes with hot potassium permanganate dressings alternating occasionally with hydrogen peroxide.

Though this young man was desperately and dangerously ill for some hours and notwithstanding the sloughing of much of the platysma myoides, the sterno-mastoid, the pectoralis major and even a portion of the trapezius, yet he too eventually recovered.

## SOCIETY REPORTS

### MEETING MEDICAL SOCIETY OF SOUTH CAROLINA, CHARLESTON, S. C.

The bi-monthly meeting of the Medical Society of South Carolina was held at Roper Hospital, November 25, 1924, at 8:30 P. M. Out of an enrollment of 74, 37 were present. Several visitors were present, including Mr. Alexander Sprunt, Jr., and Mr. Burnham Chamberlain, of the staff of the Charleston Museum. Routine business of the Society was transacted. The following new members were elected: Drs. W. P. Rhett, J. C. Beckman, and B. R. Baker.

The scientific program began with a medical case report. Dr. O. B. Chamberlain reporting a case of hydrophobia:

"Wilhelmina Deas, a negro girl of 14, from Meggetts, S. C., was brought in the Emergency Room on the night of October 19, 1924, with the following history: Two days before, on the 17th, she was bitten on the left cheek by a dog. This dog was supposed to be mad, and, according to the patient's mother, it had bitten two other children. The dog had been shot and its head so badly torn that no attempt was made to send it to the laboratory. The child had been taken to a doctor just after the accident, but his name was not gotten by the interne on emergency duty, nor was it ascertained whether he cauterized or otherwise treated the wound.

In the Emergency Room the wound, which was lacerated but did not penetrate the cheek, was painted with the tincture of iodine. It had begun to granulate and was partially closed. The child was told to return for the series of antirabic serum. These were begun on the 21st and continued daily until the 30th, on which date she did not appear. She returned on the 31st, with a trivial excuse, and came regularly until the 5th. The wound had been healing uneventfully and dressings had been discontinued. The child seemed perfectly well and did not appear excited or emotional in the slightest degree. On the early morning of the 8th she was brought to the Hospital with the history, that she had felt "bad and nervous" on the day and night preceding. She was admitted to the ward. She was frightened, nauseated, and very restless. An attempt to give her bromides met with a spasm, and she

was given a hypodermic of codeine. She refused to go to bed, apparently being more comfortable sitting in a chair. Her temperature was not taken on admission because of her excitement when anything was placed in her mouth. She was seen by the writer at 10:30. She presented the picture of a frightened colored girl sitting huddled up in a chair. Her answers to questions were perfectly rational. She showed no outbreak of emotion when the history of the bite was recalled. Getting the history from the nurse of the so-called spasms when swallowing was attempted, it was suggested that a glass of water be brought into the room, a most remarkable outburst occurred. The child made a straggling, choking noise and sprang straight up from the chair, almost knocking the examiner down, and incidentally frightening him rather badly. She subsided into the chair when the water was removed. Questions as to just how she felt when she saw the water elicited nothing. The child was not able to analyze her feelings, and the act seemed rather a sort of involuntary reflex. The experiment was repeated once, as a check, and the same result followed.

"On account of the uncertain symptoms which might develop, it was thought better to transfer the case to one of the isolated rooms. Consultation was asked with the Medical Service. It might be said at this point that the wounds were quite healed. No inflamed or angry appearance of the scar was noted. Because of the visiting physician's very limited knowledge of the suspected condition, the interne, Dr. Etheridge was instructed to get in touch with Dr. Mood and follow his instructions. Nothing was given by mouth. Hypodermics of morphine were ordered to quiet.

"After transferring out to Psychiatry, the girl became very much excited and screamed and cried a good deal. She was rather rigid and had tonic spasms, resembling tetanus. Foamy saliva came from her jaws. Mag. Sulphate was given in 1 cc doses intramuscularly, and 1 drachm Sod. Bromide with 20 gr. of Chloral Hydrate by stomach tube. At the suggestion of Dr. Mood an intravenous injection of neosalvarsan.

This was at 1:30 P. M. She perspired very

freely after this and vomited. Her temperature was noted as 103 by axilla with a pulse rate over 120, with a question as to exact rate. Her respirations were relatively slow, being 20. This was possibly due to the morphia. During the afternoon the vomiting continued, the pulse became weaker, and she died at 6:45.

--"Laboratory:

**Urine**—No urine was examined. She did not pass any voluntarily in the morning, and in the afternoon she voided involuntarily.

**Blood**—Hgb.—95 Dare.

Total White -----14,760

Polys. 74

Small Lymph. 14

Large Lymph. 10

Mononeuc 1

Transitional 1

No lumbar puncture was done."

The paper of the evening was read by Dr. G. McF. Mood on "Hydrophobia", a copy of which appears elsewhere in this Journal. This report and paper elicited considerable discussion. In his paper, Dr. Mood who is City Bacteriologist, brought out the fact that more than 50 individuals had been given the Pasteur treatment during the past 6 or 8 months, and that 50 odd animals had been found to be rabid on pathological examination. Among the animals were 12 cats, 9 of whom were found to be positive. Dr. J. M. Green, City Health Officer, in discussing the epidemic of rabies in Charleston, pointed out that the Board of Health was very much concerned and was making every effort to cut down the number of cases present in the city. He stated that the city had recently adopted a dog ordinance, which when properly enforced would do much towards the elimination of this dreadful malady. He stated that the Board of Health had under way plans for wide publicity as to methods of prevention; that it had urged City Council to provide the Police Department with adequate funds to enforce the ordinance.

**Under Surgical Case Report**, Dr. D. L. Maguire exhibited a case of a boy who had been badly bitten by a shark while in swimming at Folly Beach. The following is a summary of the report made:

"This patient a young white adult, 21 years of age, was admitted to Roper Hospital July 31, 1924, at 5:00 o'clock in the afternoon. He gave the following history: He was in the surf, about up to his waist, at Folly Beach, at 3:00 o'clock the same afternoon,

and was suddenly attacked by a large fish which he thought was a shark. He was rescued by some people at the Beach and, on being brought out of the water, it was found that he had an extensively mangled wound of the calf of his right leg, and that he had several wounds also on his left leg. These wounds were bandaged and the patient was hurriedly transported to Roper Hospital.

"On admission, the patient's general condition seemed fair. His pulse was 80, temperature 99, and respiration 28. Shock, apparently, was not present, so that he could not have had very much hemorrhage. On examination of his legs it was found that he was suffering with an extensive lacerated and mangled wound of the calf of his right leg. Both the gastrocnemii and solei muscles had been torn across and lay hanging out on the outside of skin. The tibia posteriorly was partly bared. On examination of the left leg, it was found that he had three lacerated wounds around the patella and upper portion of the tibia.

"The patient was immediately ordered to the operating room and there the wounds were sutured. The wounds were sutured with plain gut No. 2, being accurately approximated. The skin was sutured with silk worm gut, interrupted. In all, over one hundred sutures were inserted. The operation consumed about one hour and twenty minutes.

"The patient was removed from the operating room and placed back in bed, in very good condition.

"The recovery of the patient was rather uneventful. The wound showed some slight infection. Sutures were removed on 10th day, and what appeared to be a tooth was removed from the tissues on this day. The wound, up to the 21st day, showed some slight sero purulent discharge.

"The patient remained in the hospital for 28 days, when he was discharged in good general condition. His wounds were practically healed except two small wounds, one on the anterior surface and another on the lateral aspects of the leg. He was instructed to report to the out-patient ward for further dressing and observation.

"The patient came regularly to the out-patient department where his leg was dressed every other day. On September 10, 1924, a slight swollen tender spot appeared on the lateral aspect of the scar and on incision, two teeth were extracted.

"On November 4, 1924, the patient was



readmitted to the hospital on account of a tenderness in the region of the left patella. This was X-Rayed and reported that apparently a tooth was present underneath the skin. He was operated on and another tooth removed from that region. He remained in the Hospital until November 14, 1924, when he was discharged in good condition and his wound over the patella healed.

"During the 1st stay in the Hospital his urine was examined several times, with negative results. Also a negative Wassermann was reported."

Mr. Alexander Sprunt of the Museum Staff led the discussion and pointed out that the teeth which had been removed from the boy's wounds were fragments of the teeth of the sand, or shovel-nosed shark, which was one of the common sharks in the waters

in and about Charleston. He briefly discussed the various types of shark and biting fish. He pointed out that the injury could not have been inflicted by the baracuda, which was first thought to be the case. He stated that the baracuda did not come so close to shore and that their teeth were shaped differently from the fragments found in the boy's wound; that, considering the number of shark in the waters of the South Carolina Coast, the shark bite was rather an unusual occurrence. He stated that sharks were more likely to bite an object that was standing still; that they rarely interfered with a body in motion. This case report was discussed by a number of physicians present.

W. ATMAR SMITH, M. D.  
Secretary.

## BOOK REVIEWS

**NEUROLOGIC DIAGNOSIS.** By Loyal E. Davis, M. D., Associate Professor of Surgery, Northwestern University Medical School; Fellow of the National Research Council. 12mo. of 173 pages with 49 illustrations. W. B. Saunders Company, Philadelphia and London: 1923, Cloth, \$2.00 net.

With a better knowledge of nervous disorders will come the unraveling of many complex problems in diagnosis. This author has made a definite contribution to this end.

**MANUAL OF OBSTETRICS,** by John Cooke Hirst, M. D., Associate in Gynecology and Obstetrics Graduate School of Medicine, University of Pennsylvania; Associate in Obstetrics, School of Medicine, University of Pennsylvania. Second Edition, Entirely Reset. 12mo of 551 pages with 229 illustrations. Philadelphia and London; W. B. Saunders Company, 1924. Cloth. \$4.50 net.

This is a splendid book thoroughly revised. The illustrations are admirable and the text creditably presented.

**A TEXT-BOOK OF PATHOLOGY.** By William G. MacCallum, M. D., Professor of Pathology and Bacteriology. Johns Hopkins University, Third edition, Thoroughly revised. Octavo volume of 1162 pages with 575 original illustrations. Philadelphia

and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.

Pathology is becoming more and more to deserve the constant study of not only the specialist in this line but particularly the busy practitioner in medicine and surgery. The author in this edition calls attention to a newer knowledge of rickets, diabetes, tumors and infections, encephalitis typhus, etc. The illustrations numerous and illuminating.

**THE MEDICAL CLINICS OF NORTH AMERICA.** (Issued Serially, one number every other month.) Volume VIII, Number III, November, 1924. (Philadelphia Number.) Octavo of 324 pages and 29 illustrations. Per Clinic year (July, 1924 to May, 1925). Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

These clinics are now put up in a very attractive form, well bound, in regular book form in fact. The November number is rich with material for the internist. The first article on pneumonia by Riesman is good, well worth reading. Attention is called to several important matters as for instance the following:

1. The less handling the better.
2. No sponging except in unusual cases.
3. No company.

4. Ice-cap to the head and alkalinization of the patient.

He recommends digitalis early in all serious cases. In children he suggests the old fashioned flax seed poultice. He calls special attention to care in convalescence.

**THE PRACTICE OF PEDIATRICS.** By Charles G. Kerley, M. D. Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M. D., Associate in Diseases of Children in the College of Physicians and Surgeons, New York City. Third Edition, revised and reset. Octavo of 922 pages, 150 illustrations, Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$9.00 net.

This has been one of the most popular books with the general practitioner especially on the subject. The revision has been very much to the improvement of the book.

**A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR.** By E. B. Gleason, M. D., Professor of Otology in the Medico-Chirurgical College Graduate School, University of Pennsylvania. Fifth Edition, thoroughly revised. 12mo of 660 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$4.00 net.

Gleason has given the profession a pre-eminently practical book with many good ideas for the busy man to grasp quickly and put into practice.

**THE MEDICAL CLINICS OF NORTH AMERICA.** (Issued Serially, one number every other month. Volume VIII, Number II, (September, 1924, Chicago Number). Octavo of 273 pages and 24 illustrations. Per clinic year (July 1924 to May 1925). Paper \$12.00; Cloth \$16.00; Philadelphia and London: W. B. Saunders Company. The Chicago number is equal in interest to the predecessors. One of the best articles in this one is on "Pyloric Stenosis in Infancy," by Gerstley and Wilhelmi.

**DEVELOPMENTAL ANATOMY.** A Text Book and Laboratory Manual of Embryology. By Leslie B. Arey, Professor of Anatomy at the Northwestern University Medical School, Chicago. Octavo volume of 433 pages, with 419 illustrations, many in color. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$5.50 net.

A volume of this kind must necessarily be rich in illustrations and the reader will not

be disappointed in this regard. We are pleased to recommend the book for medical students especially.

**HUMAN CONSTITUTION.** A Consideration of its Relationship to Disease. By George Draper, M. D., Associate in Medicine at Columbia University, New York City. Octavo of 345 pages with 208 illustrations and 105 Tables. Philadelphia and London: W. B. Saunders Company, 1924. Cloth. Cloth \$7.50 net.

In this rather unique volume the author states his object in writing such a book as follows: First it attempts to present to the physician a dependable method for studying morphology; second, to point out the inadequacies of the existing observational and descriptive procedure; and third, to emphasize the interest and importance of the Study of Human Constitution.

**OPERATIVE SURGERY.** Covering the Operative Technic involved in the operations of general and special surgery. By Warren Stone Bickham, M. D., F. A. C. S. Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six Octavo volumes totaling approximately 5400 pages with 6378 illustrations, mostly original and separate Desk Index Volume. Volume V containing 880 pages with 1118 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free.

The entire profession as we have said before is tremendously indebted to Dr. Bickham for his magnificent work on operative surgery. The author is a Southern surgeon by training, and in New York has forged to the front with one of the most elaborate series of volumes on "Operative Surgery" ever published in America.

**ESSENTIALS OF PRESCRIPTION WRITING.** By Cary Eggleston, M. D. Assistant Professor of Pharmacology, Cornell University Medical College, New York City. Third Edition, Revised. 32mo of 146 pages, Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$1.50 net.

Prescription writing is in danger of becoming a lost art without frequent contributions such as the author has given us.

**ABT'S PEDIATRICS.** By 150 specialists Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern Uni-

versity Medical School, Chicago. Set complete in eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate Index Volume free. Now ready—Volume V containing 865 pages with 373 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$10.00 per volume. Sold by Subscription. A large part of this most excellent volume is devoted to orthopedics and to diseases of the bones, though many other subjects are treated.

**DISEASES OF THE HEART.** By Dr. Henri Vaquez, Professor of the Faculty of Medicine of Paris; Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City; Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth \$8.50 net.

The output on "Diseases of the Heart" in recent years has been enormous. The translator says that this book was written for the general practitioner by the foremost cardiologist and that it is the most popular text book throughout latin Europe on the diseases of the heart. The radioscopic as presented here are especially rich in information.

**A LABORATORY GUIDE IN HISTOLOGY.** By Leslie B. Arey, Ph. D., Professor of Anatomy in the Northwestern University Medical School, Chicago. Second Edition, Revised. 12mo of 96 pages. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$1.25 net.

The writer has presented a small but practical book worthy of the students notice.

**THE SURGICAL CLINICS OF NORTH AMERICA.** (Issued serially, one number every other month.) Volume 4 number 4 (Cleveland Number—August, 1924,) 248 pages with 218 illustrations. Per clinic year (February, 1924 to December, 1924.) Paper \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The Cleveland clinic is one of the most virile clinics of this country and is the mecca for numerous surgeons. Dr. Crile has a world wide reputation as a master surgeon of that city. There are many good articles in this book, however, by other authors.

**MANUAL OF PSYCHIATRY.** For the Medical Student and General Practitioner. By Paul E. Bowers, M. D., Examiner in Lunacy, State of California; Lecturer in Neuropsychiatry, Post-Graduate Medical School of the University of California, Los Angeles. Octavo volume of 365 Pages. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$3.50 net.

The field of pschiatry is of an ever increasing interest, not only to the expert, but to nearly all of the practitioners of medicine and surgery. The whole subject of deviations from the normal mind is of intense interest from both a theoretical and practical point of view. The subject has not only been treated exhaustively by writers of fiction from time immemorial but all schools of medicine have found the subject worthy of investigation. The medical schools have not stressed pschiatry as they should in the curriculum, though this feature is improving. The matter of prevention of mental diseases is of more recent origin and gives hope of some success. The author outlines in a satisfactory way the all important question of how to examine a patient, among the other good things in the book.

**ABT'S PEDIATRICS.** By 150 specialists. Edited by Isaac A. Abt, M. D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set complete in eight octavo volumes totaling 8000 pages with 1500 illustrations, and separate Index volume free. Now ready—Polume IV containing 1271 pages with 271 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by Subscription.

The fourth volume treats largely of diseases of the chest and the blood, though diseases of the kidney and genito-urinary system are fully elaborated.



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